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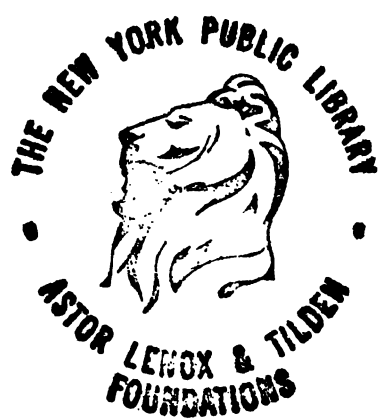
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Paris
Expo

CATALOGUE
OF THE
MINERALS, ORES, ROCKS AND FOSSILS
IN THE PACIFIC COAST EXHIBIT
TO THE
PARIS EXPOSITION OF 1878.

SAN FRANCISCO:
EDWARD J. PARSONS, CIVIL ENGINEER, 25, CALIFORNIA STREET, & CLAY STREET.
1878.



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CATALOGUE

OF THE

MINERALS, ORES, ROCKS AND FOSSILS

OF THE PACIFIC COAST EXHIBITION

AT THE PARIS EXPOSITION

OF 1878.

55690

SAN FRANCISCO EXECUTIVE COMMITTEE:

ALMARIN B. PAUL,	MELVILLE ATIWOOD,
HENRY G. HANKS,	A. DERRE,
J. P. JACKSON,	E. J. FRASER, M. D.
S. HEYDENFELDT, JR.	

MINERAL DEPARTMENT
CALIFORNIA COMMISSION FOR THE
PARIS EXPOSITION OF 1878.

INTRODUCTION.

The California Commission for the Paris Exposition of 1878 had its origin in a public meeting of citizens, which issued an address to the people of California, setting forth the advantages to the State that would result from an exhibit of the various agricultural, mechanical, mineral and art productions of the Pacific Coast. Committees in the different departments were appointed, who assumed their duties cheerfully. Much progress was made by these committees. The Commission was warmly supported by the Press, and was popular throughout the State. It was supposed that all its varied resources would be shown in such a manner as to place California in the position it deserves before the world.

As the work progressed, it was found that a considerable sum of money would be required to carry out the plans of the various committees, and it was decided to make an application to the Legislature of the State, then in session, for the necessary funds. Much time was lost while awaiting the action of that body. The Legislature declining to make the appropriation asked, it was found to be too late to provide other means for completing the work.

Considerable progress having been made in the Mineral Department, and funds being generously placed at its disposal by a public spirited citizen, it was decided to make the collection as complete as possible, and to send it forward.

It is due to the other committees to say that had they been able to carry out their plans, their exhibits would have been of equal, if not of greater interest to the world, for it is not generally known how immense our resources—other than mineral—really are, while California as a great mineral producing State is known far and wide.

In making an exhibit of minerals and mineral products, it was thought best to include the whole Pacific Coast, as California capital is largely invested in the mines of the other states, and most of the offices of mining companies are at San Francisco.

PACIFIC STATES.

The Pacific States are generally understood to be those which look to the Pacific sea coast cities for their supplies, and which are dependent for capital on those cities. They may be enumerated as follows: California, Oregon, Washington, Utah, Nevada, Arizona, Idaho and Alaska. Montana, Wyoming, Colorado and New Mexico hold a middle position, but look more to the East for their supplies, and send their products in that direction more than to the Western sea board.

Some of the Pacific States are noted for their fertile agricultural lands, and others for their mineral wealth. All are capable of supporting a large population, and the climate is such that manufactures can be carried on to great advantage.

California has a sea coast of 700 miles in length, embracing 9 degrees of latitude; the mean width of the State is about 200 miles. It has an area of nearly 16,000 square miles, greater than New England, New York and Pennsylvania combined; two chains of mountains, parallel to the general trend of the sea coast, extend its entire length. The Sierra Nevada chain is the great back-bone, so to speak. The rain falling on these mountains divides at the summit, one portion finding its way to the Pacific ocean, the other flowing into the great basin, where it either sinks into the loose, sandy soil, or spreads out into lakes of greater or less magnitude, which are kept in a state

of equilibrium by evaporation. The Coast Range is a low chain of mountains running near the sea coast, as the name indicates. In the Southern part of the State a third chain of mountains lies East of the Sierra Nevada, separated from it by a narrow valley ;—they are called the Inyo mountains. They differ from other mountains of California, in being highly argentiferous. Owens Valley, which separates them from the Sierra Nevada, is remarkable for its nearly equal width, and great length, extending as it does for 100 miles in a direction somewhat West of North. The mountains both East and West of Owens Valley are the highest in the State, and some of the peaks the highest in North America. Mount Whitney reaches an altitude of 15,000 feet. This celebrated mountain is surrounded by at least 100 peaks, all of which are over 13,000 feet in height.

San Francisco possessing the great sea port of the Western Coast, and being the terminus of the various railroad lines, can and does furnish the mines with their principal supplies, while San Francisco mechanics employ a large number of workmen in the manufacture of mining machinery. in which branch of workmanship they cannot be excelled. On the other hand, most of the product of the mines finds its way to San Francisco, from whence it is sent to all parts of the world.

The fact that San Francisco Bay is the only perfect sea port from Acapulco to the Straits of Fuca, gives to California a great commercial advantage over her sister States. Add to this her equable climate, her boundless natural resources, and the future greatness of the State cannot be questioned.

California owes her present greatness to the accidental discovery of gold in 1848. The presence of gold in California had been suspected, if not actually known, for many years. It is well known that gold bearing quartz was worked by a Frenchman named Baric, at a locality near the Mission of San Fernando as early as 1843. Placer gold in moderate quantities had been found at a still earlier period, but the discovery of rich placers at Sutter's Mill by Marshall, in 1848, may be regarded as the New Era.

This discovery caused a flood of population to the State from every part of the world. No doubt the vast agricultural resources of California would have eventually attracted a large population even had gold been unknown, but a longer time would have been required to effect it.

The following figures, furnished by the *Journal of Commerce* of San Francisco, will convey some idea of the agricultural products of the State :

Wheat crop from 1855 to 1877, inclusive, 22 years,
195,595,000 centals.

Barley crop from 1862 to 1876, inclusive, 15 years,
57,350,000 centals.

Of Corn, (Maize), from 1870 to 1877, inclusive, 8
years, the product was 5,990,000 centals.

The Wheat crop of 1877 was 12,895,000 centals, val-
ued at \$26,000,000.

The yield of the Vintage of 1877 was 8,000,000 gallons
of wine.

The yield of Wool in California from 1854 to 1876,
inclusive, 23 years, was 384,061,145 pounds.
Total product of the entire Pacific Coast for the
same period, 452,011,145 pounds, valued at \$86,-
500,000. The yield for the year 1877 was 53,-
110,742 pounds, valued at \$9,500,000.

The commercial importance of California may be seen by
the following statistics from the same source.

Total population of the Pacific Coast, 1,650,000.

Population of California, 938,000.

Population of San Francisco, 308,215.

Custom dues collected in 1877, \$6,692,432 56.

Total imports, 1877, \$75,713,272.

Total exports, 1877, \$61,911,237.

Immigrants arrived, 1877, 62,171.

Emigrants departed, 1877, 45,257.

Value of the product of whale fisheries, 1877, \$319,568.

Number of vessels engaged, 12.

Tonnage, 3,452.

Value of manufactured products of the State in 1877,
\$61,000,000.

The gold bearing belt of California known as the great mother vein, commences in Kern county, and extends through the following counties: Tulare, Fresno, Mariposa, Tuolumne, Calaveras, Amador, El Dorado, Placer, Nevada, Sierra, Plumas and Shasta.

All the noted mines of California lie along this belt. The lithological character of the formation is peculiar, and is easily recognized by mining men and prospectors. It is so metamorphic in its character that its geological age is not with certainty known. No fossils have been found, except on the Mariposa Estate, in Mariposa County. For a description of these, which are undoubtedly Jurassic, reference may be made to the Geological Survey of California, Geology, Vol. 1, Folio 226.

The circumstances under which these fossils were found, the few specimens obtained, and the metamorphic character of the formation in which they occur, scarcely warrant the assumption that the entire belt is of Jurassic age. The gold bearing rocks of California afford an interesting field for future geological investigation.

MINING.

Mining, as practiced in California, may be divided into three distinct classes.

Placer Mining.

Hydraulic Mining.

Working of Mineral Veins.

When gold was first discovered, it was sought only in the beds of rivers, on the bars and shoals formed by the currents and eddies of swift running mountain streams. The first appli-

ances were rude and imperfect. Still gold was so abundant, that large quantities were collected by simply washing pansfull of the rich earth, and by what was called "crevicing," which is seeking depressions in the bed rock and taking from them, by the simple process of removal, the accumulation of years with a knife or other instrument, and washing it in an iron pan, at the margin of some convenient stream.

Gradually the bars were worked out and the gold was sought in the alluvial deposits, on the borders of the rivers, sometimes with success, but often otherwise.

As these deposits contained less gold than those first discovered, in the beds of streams, labor-saving machinery was required, that larger quantities might be subjected to the washing process. This want led to the introduction of the cradle, long tom, and the sluice with its improvements, such as the block-riffles, zigzags, undercurrents, &c.

When these deposits failed or were found less profitable, hydraulic mining naturally followed, as an improvement on all other methods of collecting Placer gold.

Only under the following conditions is hydraulic mining practicable.

1st. The alluvial auriferous earth, no matter what its depth may be, must be moved to the bed rock.

2d. A channel must be made with sufficient fall, by which an unlimited quantity of the refuse or tailings may be carried away.

3d. A sufficient supply of water to keep the tailings in motion in the sluice, and to carry away all the earth after it is disintegrated by the stream from the hydraulic nozzle.

4th. A constant stream of water from a reservoir, sufficiently high to give the requisite force to wash away the bank and disintegrate the deposit.

This system of mining, is not only very profitable, but produces large quantities of gold annually from deposits which would otherwise be worthless.

The following statement, from published statistics on this subject, will show the great advantage of this system over others :

Cost of moving a cubic yard of gravel, miners' wages being \$4 per day :

With the Pan.....	\$20 00
“ Rocker.....	5 00
“ Long Tom.....	1 00
“ Hydraulic System...	0 05

Some of the Hydraulic mines are worked in California on an immense scale, very large sums of money being invested for years before any return is possible.

Vein mining is conducted in California and other Pacific States, much as it is elsewhere. The country being new, and labor high, advantage is taken of every form of labor-saving machinery. According to the best authorities, the Pacific Coast is not behind other parts of the world in carrying out its gigantic mining operations.

YIELD OF THE PRECIOUS METALS.

The following, from statistics furnished by the San Francisco Journal of Commerce, shows the total yield of gold and silver during the last 29 years:

Gold.....	1,561,409,508
Silver.....	407,426,678
Total.....	<u>1,968,836,186</u>

Wells, Fargo & Co. have published a statement of the yield of precious metals for the year 1877, which is given in full.

Lloyd Tevis, President,
J. B. Haggen, Vice-President,
James Heron, Secretary

H. B. Parsons, Ass't. Sec'y.,
H. Wadsworth, Treasurer,
Jas. J. Valentine, Gen. Supt.

WELLS, FARGO & COMPANY,

EXCHANGE, BANKING AND EXPRESS.

Office Gen. Superintendent.

San Francisco, Dec. 31, 1877.

DEAR SIR : The following is a corrected copy of our annual statement of precious metals produced in the States and Territories west of the Missouri River, including British Columbia, and receipts in San Francisco from the West Coast of Mexico, during 1877, which shows an aggregate result of \$98,421,754, being an excess of \$7,540,581 over 1876, the greatest previous annual yield in the history of the country. Arizona, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah and Washington increase; British Columbia, California and Montana decrease; but it is possible the falling off in Montana is more apparent than real. In our statement for 1876, Dakota (Black Hills) was not mentioned. That territory is included herein, credited with \$1,500,000 gold, but the estimate is uncertain, as \$950,000 is the total amount carried out of it during the year by all express companies and mails. The amount named as carried by other conveyances from Dakota is conjecture. If the Comstock mines yield as much in 1878 as during the present year, the aggregate product of *silver and gold* from all sources named, will approximate one hundred millions of dollars.

STATEMENT OF THE AMOUNT OF PRECIOUS METALS PRODUCED
IN THE STATES AND TERRITORIES WEST OF THE MISSOURI
RIVER, INCLUDING BRITISH COLUMBIA, AND RECEIPTS IN
SAN FRANCISCO FROM THE WEST COAST OF MEXICO, DURING
THE YEAR 1877.

STATES AND TERRITORIES.	Gold Dust and Bullion by Express.	Gold Dust and Bullion by other con- veyances.	Silver and Dore Bullion by Express.	Ores and Base Bullion by Freight.	TOTAL.
California	\$14,512,123	\$725,606	\$ 1,202,751	\$1,734,236	\$18,174,716
Nevada	462,666	.....	44,320,044	6,797,580	51,580,290
Oregon	993,331	198,666	.....	.....	1,191,997
Washington	83,842	8,384	.....	.....	92,226
Idaho	1,140,610	171,091	202,295	318,499	1,832,495
Montana	1,844,214	184,421	436,277	180,000	2,644,912
Utah	91,109	9,110	1,439,961	6,573,575	8,113,755
Colorado	3,151,277	.....	3,197,861	1,564,411	7,913,549
New Mexico	81,680	.....	273,840	23,490	379,010
Arizona	122,867	.....	506,549	1,759,206	2,388,522
Dakota	950,000	550,000	.....	.....	1,500,000
Mexico	72,144	.....	1,020,636	340,212	1,432,992
British Columbia	1,165,527	11,653	.....	.....	1,177,180
	\$24,671,400	\$1,853,931	\$52,600,214	\$19,291,209	\$98,421,754

We have used the utmost care and diligence in ascertaining the character of bullion and ores reported, with the following result: the yield of the Comstock mines is 45% gold; of the whole bullion product of Nevada, 37% is gold; and of all so-called silver or base bullion, 28% is gold. The gross yield for 1877, shown above, segregated, is, in round numbers, as follows:

Lead, 5%	\$ 5,085,250
Silver, 48%	47,206,957
Gold, 47%	46,129,547
	\$98,421,754

As lead is an important element in what is herein termed base bullion, we might add that of Missouri and Illinois, value approximately \$1,500,000; which, with the silver and gold of the Lake Superior country, Virginia and North and South Carolina, amount say \$500,000, would swell the gross product to over \$100,000,000 for the year. The lead product of Utah, Nevada and California, exceeds that of the remainder of the

United States and Territories combined; and in tonnage is greater this year than ever before, though not exceeding in value that of 1876, the average price having been lower than for many years past.

In our statement for 1876, the amount credited to British Columbia and West Coast of Mexico, were inadvertently carried into the totals credited to the United States, in the estimates given in this statement. Deducting amounts for the sources named, the results are as follows :

YEAR.	Products as per W.F. & Co's Statements, includ'g Amts from British Columbia and Mexico.	Products, less Amounts f'm Brit. Columbia and Mexico.	Net Product of the United States and Territories west of the Missouri River, divided as follows:		
			LEAD.	SILVER.	GOLD.
1870	\$54,000,000	\$52,150,000	\$1,080,000	\$17,320,000	\$33,750,000
1871	58,284,000	55,784,000	2,100,000	19,286,000	31,398,000
1872	62,236,959	60,351,824	2,250,000	19,924,429	38,109,985
1873	72,268,693	70,139,860	3,450,000	27,443,302	39,206,558
1874	74,401,045	71,965,610	3,800,000	29,699,122	38,466,488
1875	80,889,057	78,703,433	5,100,000	31,635,239	39,968,194
1876	90,875,173	87,219,859	5,040,000	39,292,922	42,886,935
1877	98,421,754	95,811,582	5,085,250	45,846,109	44,880,223

We are uninformed as to the annual exports of silver to India, China and the Straits previous to 1851, but assume that they were less than since that date, which being so, the exports this year are the greatest known, viz : \$105,000,000 to the 26th instant. The greatest amount in former years was \$83,650,000, in 1857. The amounts exported during the present year, were approximately as follows : From Southampton, \$80,000,000; from San Francisco, \$19,000,000; from Marseilles, \$4,000,000; from Venice, \$2,000,000.

We take pleasure in acknowledging the prompt responses of persons applied to for information, and to whose cordial co-operation we are indebted for much of the data necessary to our compilations.

JNO. J. VALENTINE,
General Superintendent.

Gold and silver are not the only mineral products of the Pacific Coast. The Quicksilver interests are of very great im-

portance, Mercury being an essential in the extraction of gold and silver, for which purpose it is largely used in the State. Besides which, great quantities are exported.

There are a number of Quicksilver mines in the State which are paying handsome dividends on the capital invested.

The principal mines of Quicksilver, are enumerated in the following table, which also shows the production of each for the year 1878, in flasks :

New Almaden	24,079
Redington	9,400
Sulphur Banks	11,303
Guadalupe	6,241
New Idra	6,560
Great Western	5,875
Altoona	1,417
St. John's	2,000
Oceanic	2,628
California	1,490
Oakland	1,395
Cloverdale	1,300
Sunderland	1,200
Abbott	836
Manhattan	457
Napa Consolidated	2,366
Buckeye	466
Phoenix	250
Gt. Eastern and Jackson	505
Wall Street	100
Other sources	500
Total	80,368

The total production from 1850 to 1877 inclusive, 28 years, has been 1,005,368 flasks.

The following official report of the New Almaden Quicksilver Mine, gives the yield for twenty-five years :

The Quicksilver Mines and Reduction works of New Almaden are fifteen miles south of the city of San Jose, Santa Clara County, California, in the Santa Cruz Mountains, at an elevation of 1,700 feet above the sea.

These mines were first worked for quicksilver in 1845, but the operations were on a small scale, and no record exists earlier than 1850. They have been, and are now, the most productive quicksilver mines in the world, excepting only the mine of Almaden in Spain. They are developed to a depth of 1,300 feet, and the workings extend horizontally, somewhat in the shape of the letter Y.

Between five and six hundred men find steady employment—the work being actively prosecuted throughout the year. From the first of January, 1864, to the thirty-first of December, 1875, the number of feet of drifting and sinking on the mines of the Company, as shown by the records, amounted to 129,724 feet, or 26.24 miles, at a cost of \$1,000,000. This does not include the excavations made in extracting ore during the period named, nor any expenses for the same.

In 1875 there were used in the mines 2,361 kegs of black powder (25 lbs. each), and 9,350 lbs. of Giant and Hercules powder—the rock in most cases requiring to be drilled and blasted. At the close of the same year, about five miles of railroad, underground, were in operation, and over 2,000 drills were in active use.

The reduction works consist of nine furnaces, and include the most improved methods for working quicksilver ores. When the present improvements are finished, they may be considered as most complete and perfect in every respect.

BASE BULLION.

The product of lead and base bullion is an important interest. By base bullion is understood crude lead, in which the silver and gold contained in the ores from which it is smelted still remains. It must be refined before it becomes an article

of general commerce. Part of this work is done at extensive metallurgical works in San Francisco, Sacramento and Contra Costa, while large quantities are sent abroad for treatment.

The following is a statement for the year 1877 :

Receipts for the year have been as follows :

	Base Bullion, lbs.	Lead, lbs.
January.....	1,011,100	.....
February.....	1,210,100	108,800
March.....	1,745,000	401,100
April.....	1,776,700	193,000
May.....	1,098,600	558,100
June.....	1,415,900	233,600
July.....	854,300	178,600
August.....	1,857,200	64,400
September.....	1,999,900	370,400
October.....	1,805,800	296,300
November.....	1,350,200	328,400
December.....	1,619,600	210,000
Totals.....	17,744,400	2,942,700

Exports for the year, according to destination, were :

	LBS.	VALUE.
New York.....	23,877,629	\$2,223,938 89
China.....	1,003,818	58,114 40
British Columbia.....	58,680	3,977 55
Mexico.....	5,371	513 16
Japan.....	1,530	72 50
Honolulu.....	1,349	119 68
Central America.....	300	24 00
Total.....	24,948,722	\$2,286,760 18

COAL.

True coal is unknown on the Pacific Coast, but lignites and brown coal are abundant. Some of the brown coals are of good quality, and answer many purposes, such as making steam, household use, etc. The want of first class coal has been a se-

rious drawback when extensive manufacturing enterprises have been proposed. A large quantity of coal is imported into the State annually. The discovery of carboniferous rocks in California, Nevada and Arizona, leads to the hope that beds of true coal may eventually be found.

The number of tons of Pacific Coast coal raised during the last 18 years is given below :

Year.	Seattle.	Bellingham Bay.	Coos Bay.	Rocky Mountain.	Mount Diablo.
1860.....	....	5,488	3,143	....	....
1861.....	....	8,136	4,628	....	6,620
1862.....	....	11,245	2,815	....	23,402
1863.....	....	9,175	1,185	....	43,198
1864.....	....	9,736	1,300	....	37,458
1865.....	....	12,370	1,525	....	60,530
1866.....	....	11,475	1,753	....	84,024
1867.....	500	8,615	5,235	....	109,490
1868.....	....	13,866	10,524	....	133,839
1869.....	....	20,552	14,754	....	148,722
1870.....	....	13,976	2,171	....	129,760
1871.....	4,545	20,924	26,731	....	133,455
1872.....	14,120	4,100	31,327	1,809	163,322
1873.....	13,572	21,210	37,898	1,904	170,000
1874.....	7,848	17,499	46,581	363	205,256
1875.....	62,119	10,440	29,078	53	142,808
1876.....	86,047	21,280	39,965	194	108,849
1877.....	101,088	10,475	30,296	134	97,674

TOTAL PACIFIC COAST.

1860.....	8,631	1869.....	184,032
1861.....	19,384	1870.....	145,907
1862.....	37,462	1871.....	185,685
1863.....	53,550	1872.....	214,678
1864.....	48,494	1873.....	244,584
1865.....	74,425	1874.....	279,539
1866.....	97,252	1875.....	244,498
1867.....	123,840	1876.....	256,345
1868.....	158,229	1877.....	239,667

BORAX.

The discovery of Boracic Acid, and the natural borates on the Pacific Coast, was made in January, 1856, by Dr. John A. Veatch, who was engaged in making an analysis of water, from Lick Springs, in Tehama County, California. Having occasion to evaporate a large quantity of the water, he was surprised to

find borax crystallizing out. This discovery led to the examination of all the mineral waters then known, which resulted in finding Boracic Acid in nearly all of them.

In September of the same year, Dr. Veatch discovered Borax Lake. This lake is situated in Lake County, California, one hundred and ten miles from San Francisco. Borax Crystals in large quantities have been found in the stratum of soft mud, forming the bottom of the lake. Besides the crystals, borax exists in solution in the water itself, from which it can be obtained by evaporation.

Borax Lake produced with profit, from its discovery until the still more remarkable discovery of the immense deposits in Nevada and in Southeastern California, considerable quantities of refined Borax. In the year 1865, the yield was 240 tons; in 1866, the daily average yield was $2\frac{1}{2}$ tons.

Boracic Acid, free or combined, is of common occurrence on the Pacific Coast; it has been found in the waters of the Pacific Ocean, along the shores of California and Oregon. Common salt, made by evaporating the sea water, contains more than traces of Boracic Acid.

It has been found in the waters of Mono and Owens' Lakes. In all probability, if an examination of the bottom of these lakes should be made, crystals or borax would be found in the mud, as at Borax Lake.

Very extensive deposits of Borax have been found near these lakes; one company—which is incorporated—is in possession of a large portion of what is known as Columbus Marsh. This remarkable saline deposit, lies in the State of Nevada, in latitude $38^{\circ} 5'$ North, and longitude 118° West. As laid down on the State Geological Map, it is an irregular oval in form, ten miles long, by seven miles wide. It is distant from Mono Lake 46 miles, in a direction a little north of east. It has evidently been an Alkaline Lake, much as Mono Lake is now. If Mono Lake did not continually receive the melting snows from the Sierra Nevada, its bed would soon, like Columbus Marsh, become a dazzling field of Alkaline salts.

This, and similar deposits, consist of common Salt, Sulphate of Soda, Borate of Lime and Borax.

The Borate of Lime—Ulexite—is found in rounded concretions, from the size of peas up to three or four inches in diameter. Large quantities of Borate of Lime were shipped to San Francisco, but it was found that the expense of transportation was greater than the highest price that could be obtained in that or the European market. It was soon discovered that the Alkaline deposit, in which the Ulexite occurred, would yield Borax if dissolved and crystallized.

The method now adopted is, to rake the deposit into heaps like hay cocks in a meadow.

These are hauled to the dissolving pans, under which large fires are kept burning. The impure solutions are run into vats from which a good article of crude Borax crystallizes on cooling.

Extensive fields of Alkali, containing Borax in varying quantities, are known to exist from Wadsworth, quite to the State line southward.

These deposits have furnished the product shown in the following table, taken from the San Francisco Commercial Herald and Market Review of June 17, 1878.

Receipts of Borax at San Francisco :

	1876. Pounds.	1877. Pounds.
January	404,300	89,610
February	432,500	288,201
March	458,200	413,047
April	530,010	227,646
May	558,300	304,576
June	540,700	408,575
July	303,700	338,925
August	476,800	350,414
September	552,300	358,375
October	442,400	297,595
November	388,700	495,095
December	93,000	582,150
Totals	5,180,910	4,154,209

MANUFACTURERS.

Smith Bros. Nevada	2,066,435
Riddell & Co., California	1,986,970
Dodge & Co., "	100,804
	<hr/>
	4,154,209

SHIPMENTS.

	1876. Pounds.	1877. Pounds.
Atlantic States	1,698,030	3,535,994
England	2,001,692	1,574,535
Germany	141,234	43,100
China and Japan	99,741	26,035
Mexico		1,010
South America		600
	<hr/>	<hr/>
Totals	3,940,697	5,181,374

SUMMARY.

	Pounds.
Shipments from S. F.	5,181,374
Stock on hand	<hr/> 434,000
	5,615,374
Receipts for 1877	<hr/> 4,154,209
	<hr/>
SALT.	1,461,165

Salt is largely produced in California, mostly from sea water. Nevada has inexhaustible deposits of natural salt at several localities. Alameda Co. Cal., produced in 1877, 18,000 tons of salt.

COPPER.

Copper may be classed among the mineral products of the Pacific Coast. In a country where the precious metals are found, the mining community often overlooks the useful and less valuable metals. This has been the case on the Pacific Coast.

Considerable copper has been shipped from San Francisco to Swansea and other European markets, but the quantity has been small as compared with the extent of the mines known to exist.

The most important copper producing locality in California, is Calaveras County; the mines at Copperopolis were for a time

extensively worked. The yield of the Union mine, according to the report of J. Ross Browne, from the time it was opened in 1861, to July 15, 1877, was 108,731,678 pounds; all of which was exported to the Atlantic States and Europe. The receipts from sales of ores produced by the Keystone mine, were \$375,000.

There are copper mines of undoubted value in Amador, Mariposa, San Luis Obispo, Los Angeles, Plumas, Del Norte, Contra Costa, Nevada and Inyo counties. In Oregon, copper occurs in considerable quantities. In Douglas county, masses of the oxides and carbonates of copper of great importance are known to exist.

Lower California too is known to possess extensive and valuable copper mines, which is also the case with Nevada and Arizona.

Attention has lately been called to the importance of copper mines producing large quantities of low grade ores. The San Francisco copper mine at Spenceville, Nevada County, California, is an example. This mine is said to be very extensive, the ore is cupriferous pyrites, very free from gangue; the average copper in the ore is 6.40 per cent. although ores may be obtained by selection, yielding as high as 17 per cent. The mine is being worked ~~exclusively~~, and according to the statement of the owners, with profit. The sulphur present in the ores supplies fuel in roasting, which is done on a large scale in heaps. The resulting product is leached with water, and the soluble copper precipitated by metallic iron. The excess of sulphur is now wasted, but eventually it is intended to erect acid chambers and otherwise to utilize the by-products.

TIN.

Tin occurs in the Temescal Mountains, in San Bernardino county, California. For some reason work has been suspended for years since its discovery, so that it is impossible to say whether this metal will become a valuable product of the State or not. The ores, which have reached San Francisco from time to time, have been sufficiently promising to warrant the

opinion that the question of value is one of quantity rather than quality.

CHROMIC IRON.

Chromic iron is found in many localities in the State of California; large shipments have been made to the Eastern States within the last eight or ten years. The supply may be considered practically inexhaustible.

PETROLEUM, ASPHALTUM, ETC.

Superficial evidences of the existence of Petroleum and other hydro-carbons have long been observed in different parts of California. Extensive deposits of Asphaltum are found in the Southern counties of the State. It is only lately, however, that any important practical results have been obtained from the numerous experiments made in refining the crude products. Much disappointment has resulted from the discovery that the Pacific Coast Petroleum yields but a small quantity of light oil suitable for burning. But large quantities of heavy oil, admirably fitted for lubrication and other purposes, is being manufactured in the State, and the production is steadily on the increase; a certain portion of light burning oil is obtained, and it is hoped that this product will be greater when more extensive explorations are made. The imports of California Petroleum into San Francisco, from January 1st, 1878, to April 1st, 1878, was 72,000 gallons.

Asphaltum is largely used on the Pacific Coast, for roofing, pavements and in the manufacture of sewer and water pipes.

LIME, GYPSUM AND CEMENT.

Lime, Plaster of Paris, and Cement, are largely produced and manufactured in California; Gypsum occurs in many localities in quantity. The manufacture of calcined plaster has recently been added to the list of Pacific Coast industries. The Golden Gate Plaster Mills produce an article which is generally preferred to that imported.

The following table gives the receipts of California Lime for the years 1876-77:

MONTHS.	1876. bbls.	1877. bbls.
January	6,880	8,460
February	9,620	7,147
March	11,076	16,548
April	21,098	19,702
May	17,554	17,842
June	21,698	13,720
July	17,320	16,191
August	17,412	15,790
September	12,848	13,079
October	17,850	13,440
November	14,620	13,610
December	16,839	3,301
Totals	184,815	158,830

IRON.

It is hardly probable that the extensive iron deposits of the Pacific Coast will be utilized at present. The cost of coal, labor, and other expenses are so great, that capital will scarcely embark in iron manufacture while so many better paying investments are to be found. It is interesting however, to know that the supply is unlimited and may be made available when the wants of the country demand its production. Oregon has found it to her advantage to commence working her iron deposits and the result is said to be satisfactory.

DIAMONDS.

Diamonds have been found in California; they are generally microscopic. A few of moderate size are known. They are generally found associated with Zircons, Topaz Magnetite, Platinum, Iridium, Chromite and Ilmenite. Microscopic Diamonds have been found on the sea beach on the Coast of Oregon and California, in washing the sands for the gold they contain. They are sometimes also found with gold, in the sluices of Hydraulic mines.

The claim of the Spring Valley Hydraulic Mining Company is a well known locality. The largest stone on record, was

found at Forest Hill, El Dorado County; it weighed $5\frac{819}{1000}$ grains. It was of good color, but was defective. Another notable stone was found at Fiddletown, Amador County; its weight was $3\frac{819}{1000}$ grains. Four other Diamonds are known to have been found at this locality.

Another Diamond of rather large size was found at Cherokee Flat, Butte County. It was of a light straw color; when set in a ring in its natural state, it was a brilliant and beautiful stone. At least forty other Diamonds, mostly of small size, have been found at this locality.

MISCELLANEOUS MINERAL PRODUCTS.

There are other mineral products of the Pacific Coast which have great economical value, and which have been worked more or less extensively. Among the more important of these may be mentioned the following: Asbestos, Antimony, Alum, Alkali, Bismuth, Building Stones; including many varieties of Marble, Baryta, Clays, Cobalt, Diatomaceous Earth, Graphite, Iridium, Mica, Manganese, Natural Paints, Nickel, Nitrate of Soda, Platinum, Pyrites, Steatite, Sulphur and Slate.

NEW DISCOVERIES.

The Pacific States not only produce large quantities of the precious and useful metals, but are likely to continue to do so. The future magnitude of the mining interest can scarcely be overestimated. There seems more fear of an over production of the precious metals than any decrease in the yield. New discoveries are continually being made, and the area of known mineral territory is widely extending. What California and Nevada have done in the production of gold and silver is likely to be repeated in Arizona and Mexico, which are now attracting the attention of prospectors and capitalists. The ores brought from these new fields are wonderfully rich, and it only remains to prove the deposits extensive. If this should be the case, there will be a flood of silver poured into the treasuries of the world, which may upset values, as the discovery of gold in California and Australia did a quarter of a century ago.

CATALOGUE OF MINERALS, ROCKS AND ORES, ETC.

1. **Diatomaceous Earth.**—SANTA BARBARA, Cal.—California State Geological Society.

2. **Diatomaceous Earth.**—STAPLE'S RANCH, San Joaquin Co., Cal.—California State Geological Society.

3. **Diatomaceous Earth.**—SEA COAST, 40 miles south of SAN DIEGO, Lower California.—California State Geological Society.

4. **Diatomaceous Earth.**—MONTEREY, Monterey Co., Cal.—California State Geological Society.

5. **Obsidian.**—CLEAR LAKE, Lake Co., Cal.—California State Geological Society.

6. **Obsidian.**—*Sulphur Bank.*—CLEAR LAKE, Lake Co., Cal.—California State Geological Society.

7. **Obsidian.**—ROSEBAUGH RANCH, CLEAR LAKE, Lake Co. Cal.—California State Geological Society.

8. **Serpentine.**—BEAR VALLEY, Mariposa Co., Cal.—California State Geological Society.

9. **Tin Ore**—*Cassiterite*—CAJALCA MINE, TEMESCAL MOUNTAINS, San Bernardino Co., Cal.—Description of this tin deposit will be found, Geological Survey of California.—Geology, vol. 1, fol. 181; assays from 35 to 60 per cent. of tin.*

* All Specimens marked thus, from the private collection of Henry G. Hanks, and are loaned to the Commission.

10. **Chromic Iron**=*Chromite*.—San Luis Obispo Co., Cal.*

11. **Chromic Iron**=*Chromite*.—LOWER LAKE, Lake Co., Cal.—California State Geological Society.

12. **Chromic Iron**=*Chromite*.—CLOVERDALE, Sonoma Co., Cal.—Exists in large quantity.*

13. **Chromic Iron**=*Chromite*.—Near LITTON SPRINGS, Sonoma Co., Cal.*

14. **Chalcedony**.—VOLCANO, Amador Co. Cal.*

15. **Partzite**=*Stibiconite*.—KERRICK COPPER MINE, BLIND SPRINGS, Mono Co., Cal.—California State Geological Society.

16. **Partzite**=*Stibiconite*.—COMANCHE SILVER MINE, BLIND SPRINGS, Mono Co., Cal.—James L. Trask.

17. **Anglesite with Galena**.—UNION MINE, Cerro Gordo, Inyo Co., Cal. An abundant mineral in the Cerro Gordo Mines. The lead reduced from it contains considerable silver.*

18 **Ionite**.—A new *Hydro-Carbon*, described in the "Mining and Scientific Press," of March 16, 1877, by Samuel Purnell.—IONE VALLEY, Amador Co., Cal.—California State Geological Society.

19. **Ionite**.—SPINK'S COAL MINE, 2 miles from LINCON, Placer Co., Cal.—California State Geological Society.

20. **Clay**.—SPINK'S COAL MINE, 2 miles from LINCON, Placer Co. Cal.—California State Geological Society.

21. **Clay**.—SPINK'S COAL MINE, 2 miles from LINCOLN, Placer Co., Cal.—California State Geological Society.

22. **Lignite**.—SPINK'S COAL MINE, 2 miles from LINCOLN, Placer Co., Cal.—California State Geological Society.

23. **Rocksalt**.—LINCOLN CO. NEVADA.—Said to be five miles long, and cliffs 600 feet high.—Holt's Map, 1876. Analysis shows it to be nearly chemically pure.*

24. **Quartz Crystals**, coated with *Malachite*.—PANAMINT, Kern Co., Cal.—Lent by S. Heydenfeldt, Jr.

25. **Cinnabar**.—GUADALUPE MINE, SANTA CLARA CO., Cal.—Raymond's Report, 1873, fol. 10.—California State Geological Society.

26. **Cinnabar**.—LAKE CO., Cal, near LOWER LAKE. Half of Boulder found in bed of a stream.*

27. **Metacinnabarite**.—REDINGTON MINE, LAKE CO., Cal.—State Geological Society.

28. **Native Mercury**.—WALL STREET QUICKSILVER MINE, LAKE CO., Cal.*

29. **Cinnabar**—CRYSTALIZED.—LAKE CO., near LOWER LAKE, Cal.—California State Geological Society.

30. **Pyrites**, found associated with CINNABAR.—REDINGTON MINE, LAKE CO., Cal.*

31. **Magnetite**.—BUTTE CO., Cal.—James E. Trask.

32. **Magnetite**.—Near AUBURN, Placer Co., Cal. From a large deposit.*

33. **Hematite**.—SISKIYOU Co., Cal.*

34. **Magnetite**.—SUTTER CREEK, Amador Co., Cal.*

35. **Jasper**.—MURPHEY'S, Calaveras Co., Cal.*

36. **Anglesite**.—UNION MINE, CERRO GORDO, Inyo Co., Cal.*

37. **Cinnabar**.—Separated from sulphur by fusion.—SULPHUR BANK, Lake Co., Cal.*

38. **Sulphur.**—SULPHUR BANK, Lake Co., Cal. In its natural state ; contains cinnabar, which separates in refining, as shown in No. 37.—California State Geological Society.

39. **Refined Sulphur.**—From No. 38.—The workman allowed the fused sulphur to flow on his fingers. The crude sulphur is placed in iron cylinders, and fused by steam heat. The cinnabar is left in the cylinder, and is obtained in a metallic state by sublimation.*

40. **Lithomarge.**—ALPHA MINE, TABLE MOUNTAIN, Tuolumne Co., Cal.*

41. **Stibnite.**—KERN Co., Cal.—James L. Trask.

42. **Mispeckel**, with TELLURIUM and GOLD.—NORTH FORK CLAIM, FOREST CITY, Sierra Co., Cal.—Discovered by accident in driving a tunnel in gravel claim ; very rich in gold.*

43. **Marble.**—TEHACHAPI, Kern Co., Cal.—Musto Bros.

44. **Zircon Sand.**—CHEROKEE FLAT, Butte Co. Cal. This sand is extremely interesting when seen under the microscope.*

45. **Silicified Wood.**—NEVADA Co., Cal.*

46. **Quartz** = *Semi-opal, with Dendrites.* -- Nevada Co., California.*

47. **Quartz** = *Silicified wood.* — SANTA ROSA, Sonoma Co., California.*

48. **Quartz** = *Silicified wood.* — SANTA ROSA, Sonoma Co., California. The wood, before silicification, has been pierced by worms.*

49. **Quartz** = *Silicified wood.*—Placer Co., near Forest Hill, California.*

50. **Quartz** = *Silicified wood.* — MONO LAKE, Mono Co., California.*

51. **Quartz** = *Pseudomorph*. — Santa Clara Co., California.*

52. **Smoky Quartz**. — OROVILLE, Butte Co., California.*

53. **Brown Jasper**. — MURPHY'S, Calaveras Co., California. This jasper polishes beautifully, and might be used for jewelry or ornamental lapidary work.*

54. **Quartz** = *Red jasper*. — MONITOR, Alpine Co., California.*

55. **Quartz**. — HORNSTONE, Mono Co., California.*

56. **Opal in Matrix**. — MOKELUMNE HILL, Calaveras Co., California.*

57. **Opals**. — MOKELUMNE HILL, Calaveras Co., California.*

58. **Quartz**. — Placer Co., California.*

59. **Jaspery Quartz**. — Near AUBUN, Placer Co., California. Occurs with quartz worked extensively for gold.*

60. **Quartz Crystals**. — Mono Co., California.*

61. **Quartz** = *Rock Crystals*. — PLACERVILLE, El Dorado Co., California.*

62. **Serpentine** = *Picrolite*. — Mariposa Co., California.*

63. **Amphibole** = *Mountain Leather*. — Mariposa Co., California.*

64. **Orthoclase**. — YOSEMITE VALLEY, Mariposa Co., California.*

65. **Obsidian**. — Lake Co., California.*

66. **Obsidian**. — Three miles north of NAPA, Napa Co., California.*

67. **Obsidian.** Inyo Co., California.*
68. **Pyrophyllite.** GREASER GULCH, Mariposa Co., California. Occurs in large boulders.*
69. **Tourmaline.** Summit of Sierra Nevada Mountains, Kern Co., California.
70. **Limonite** = *Yellow ochre.* -KNIGHT'S FERRY, Stanislaus Co., California. Found in large quantities, and has been somewhat utilized as a pigment.*
71. **Manganite, IMPURE.** CALIFORNIA. Exact locality unknown.*
72. **Obsidian.** -SULPHUR BANK, near CLEAR LAKE, Lake Co., Cal.*
73. **Grossularite,** with DATHOLITE.---SAN CARLOS, Inyo Co., Cal.*
74. **Andalusite.** -CHOWCHILLA RIVER, Fresno Co., Cal. Abundant at the locality.*
75. **Serpentine?** - LAKE Co., Cal.*
76. **Pyrolusite.** -CORRAL HOLLOW, Contra Costa Co., California. Abundant, and much used in the production of chlorine in the chlorination gold process.*
77. **Magnetite.** -ALPINE Co., Cal.*
78. **Rhodonite?**---SANTA CLARA Co., Cal., near SAN JOSE.*
79. **Pyrolusite.** -CALAVERAS Co., Cal.*
80. **Arsenolite.** -EXCHECQUER MINE, Alpine Co., Cal. This mineral results from the natural decomposition of *enargite* on the dump of the mine. The miners describe the dump as having taken fire, and, to extinguish it, it was deluged with water.*
81. **Pyrolusite.** Near CLOVERDALE, Sonoma Co., Cal.*

82. **Graphite**, IMPURE.—DUTCH FLAT, Placer Co., Cal.*
83. **Native Copper**.—COW CREEK, Shasta Co., Cal.*
84. **Magnetite**, with NATIVE COPPER.—LINCOLN TUNNEL, Butte Co., Cal.*
85. **Platinum**. — KLAMATH RIVER, Del Norte Co., Cal. This mineral is rather abundant in the northern counties of California, and is found notably in the beach sands from Cape Blanco to Cape Mendocino, with gold platinum, zircon, diamonds, and other minerals.*
86. **Hematite** = *Micaceous iron*.—Near SHASTA, Shasta Co., California.*
87. **Pyrolusite**.—COLUMBIA, Tuolumne Co., California.*
88. **Anthophyllite**. — SLATE RANGE, San Bernardino Co., California.*
89. **Cinnabar**.—SUNDERLAND MINE, San Luis Obispo Co., California.*
90. **Metacinnabarite**.—CALIFORNIA MINE, Yolo Co., California.*
91. **Cinnabar**.—REDINGTON MINE, Lake Co., California.*
92. **Cinnabar**.—PINE MOUNTAIN, San Luis Obispo Co., California.*
93. **Cinnabar-breccia**.—MANHATTAN MINE, Lake Co., California.*
94. **Cinnabar**, with CALCITE.—NEW IDRIA MINE, Fresno Co., California.*
95. **Cinnabar, on Slickensides**. — WILSON'S MINE, near VALLEJO, Solano Co., California.*
96. **Cinnabar, with Chalcedony**.—PHOENIX MINE, POPE VALLEY, Lake Co., California. This mine is celebrated for the beautiful specimens it has produced.*

97. **Cinnabar, in Sandstone.** OCEANIC MINE, San Luis Obispo Co., California.*

98. **Cinnabar, Metacinnabarite and Pyrites.**—REDINGTON MINE, Lake Co., California.*

99. **Cinnabar.**—Washed from the beds of streams, Napa County, California.*

100. **Enargite and Pyrites.**—MORNING STAR MINE, Alpine Co., California.*

101. **Stibnite.**—Near GILROY, Santa Clara Co., Cal.*

102. **Pyrites.**—JACKSON, Amador Co., Cal.*

103. **Galena, with Blende.**—BENTON, Mono Co. Cal.*

104. **Marcasite.**—TUOLUMNE Co., Cal.*

105. **Molybdenite.**—COSUMNES MINE, El Dorado Co., Cal.*

106. **Limonite.**—ALPINE Co., Cal.*

107. **Calcite.**—CERRO GORDO, Inyo Co., Cal.*

108. **Serpentine.**—PINE GROVE, Sonoma Co., Cal.*

109. **Chalcopyrite.**—SPENCERVILLE, Nev. Co., Cal.*

110. **Mispickel, Blende and Galena.**—Near AUBURN, Placer Co., Cal.*

111. **Barite.**—WHITE MOUNTAINS, Inyo Co., Cal.*

112. **Serpentine.**—MCCLLOUD RIVER, Shasta Co., Cal.*

113. **Serpentine.**—CLOVERDALE, Sonoma Co., Cal.*

114. **Thenardite.**—SLATE RANGE, San Bernardino Co., Cal.*

115. **Thenardite.**—Near COLUMBUS, Esmeralda Co., Nevada.*

116. **Blend on Dolomite.**—MINERAL KING, Inyo Co., Cal.*

117. **Aragonite.**—SUISUN, Solano Co., Cal. This mineral occurs in considerable abundance in a low hill, and is evidently of aqueous origin. Very beautiful specimens, in great variety of colors, may be obtained, which polish beautifully; but no large pieces suitable for table tops, or other ornamental work, have been found.*

118. **Aragonite.**—Near SAN LUIS OBISPO, Cal.*

119. **Azurite, Anglesite and Galena.**—ECLIPSE MINE, Inyo Co., Cal.*

120. **Magnesite.**—Near OAKLAND, Contra Costa Co., Cal.*

121. **Pyrargyrite.**—EXCHEQUER MINE, Alpine Co., Cal.*

122. **Vivianite?**—SANTA ROSA, Sonoma Co., Cal.*

123. **Cerussite after Galena.**—UNION MINE, CERRO GORDO, Inyo Co., Cal.*

124. **Aragonite.**—ALPINE Co., Cal. This mineral formed a coating on the inside of a sluice-box.*

125. **Kaolin.**—TUSCAN SPRINGS, Tehama Co., Cal.*

126. **Dolomite.**—CALAVERAS Co., Cal.*

127. **Hematite**=*Octahedral*.—PLACER Co., Cal.*

128. **Bitumen**, with CINNABAR.—NEW ALMADEN, Santa Clara Co., Cal.*

129. **Cerussite.**—RUSS DISTRICT, Inyo Co., Cal.*

130. **Partzite** (see No. 15).—DIANA MINE, BENTON, Mono Co., Cal.

131. **Azurite and Anglesite.**—ECLIPSE MINE, Inyo Co., Cal.*

132. **Gold**, with SYLVANITE.—MELONES MINE, Calaveras Co., Cal.*

133. **Dolomite.**—MENDOCINO Co., Cal.*

134. **Altaite.**—RAW HIDE RANCH, Tuolumne Co., Cal.*

135. **Dolomite.**—WHITE MOUNTAIN, Mono Co., Cal. This mountain takes its name from its white summit, which seems to be composed of *dolomite*, which is found in abundance at its base. The mountain is the highest of the Inyo Range, and is never free from snow at its highest points.*

136. **Tetrahedrite.**—"JACOBS' WONDER" MINE, PANAMINT, Kern Co., Cal.*

137. **Galena on Quartz.**—ORLEANS MINE, near AUBURN, Placer Co. Cal.*

138. **Bindheimite.**—UNION MINE, CERRO GORDO, Inyo Co., Cal.*

139. **Borax**=*Tincal*.—SLATE RANGE, San Bernardino Co., Cal. Occurs in great quantities with *thenardite* and salt, in beds of ancient lakes.*

140. **Borax Crystal.**—BORAX LAKE, Lake Co., Cal. Formerly found in the mud of the lake in great abundance. The deposit is not now worked owing to the discovery of the remarkable deposits of borax in Nevada and Southern Cal.*

141. **Bornite**=*Erubescite*.—KING'S RIVER, Fresno Co., Cal.*

142. **Chromic Iron**=*Chromite*.—NAPA Co., Cal.*

143. **Hydromagnesite.**—CALIFORNIA.—Exact location unknown.*

144. **Cuproscheelite**.—GREEN MONSTER MINE, Kern Co. Cal.*

145. **Asphaltum**.—SANTA BARBARA, Cal.*

146. **Chalcosite**.—INYO Co., Cal.*

147. **Gypsum**, with **SULPHUR**.—INFERNO, Humboldt Co., Nevada.*

148. **Gay Lussite**.—ALKALI LAKE, Humboldt Co., Cal.*

149. **Gay Lussite**.—ALKALI LAKE, Humboldt Co., Nevada.—California State Geological Society.

150. **Stephanite**.—CROWN POINT MINE, COMSTOCK LEDGE, VIRGINIA, Nevada.*

151. **Hematite**.—Near SPENCERVILLE, Nevada Co., Cal.*

152. **Compact Gypsum**.—MONTEREY Co., Cal.*

153. **Gypsum** = *Selenite*.—Near ELKO, Nevada.*

154. **Calcite and Strontianite**.—AUSTIN, Nevada.*

155. **Calcite** = *Pisolite*.—Near RENO, Nevada.*

156. **Calcite** = *Pisolite*.—Near AUSTIN, Nevada.*

157. **Lime Stone** = *Encrinal*?—WHITE PINE, Nevada.
Rich silver mines are found with this rock.*

158. **Aragonite**.—LUCIEN DISTRICT, Elko Co., Nev.*

159. **Aragonite**.—NEVADA.*

160. **Kustelite**.—COMSTOCK LODE, VIRGINIA, Nevada*

161. **Cerargyrite**.—EBERHARDT MINE, White Pine Co., Nevada.*

162. **Tetrahedrite**, with **DIALOGITE**.—AUSTIN, Nev.*
163. **Quartz Crystals**.—COMSTOCK LODE, VIRGINIA CITY, Nevada.*
164. **Hydromagnesite**.—NEVADA.*
165. **Alum and Sulphur**.—COLUMBUS, Esmeralda Co., Nevada.*
166. **Rose Quartz**.—COMSTOCK LODE, VIRGINIA, Nev.*
167. **Gothite?** (microscopic crystals).—PIOCHE, Lincoln Co., Nevada.*
168. **Trona**.—ALKALI LAKE, San Bernardino Co., Cal.*
169. **Ulexite** = *Borate of Lime*.—THIEL SALT MARSH, Esmeralda Co., Nevada. Very abundant with salt, tincal and sulphate of soda.*
170. **Cinnabar in Silver Ore** —BARCELONA MINE, SPANISH BELT, Nye Co., Nevada.*
171. **Chalybite**.—NEVADA.*
172. **Sulphur**.—COLUMBUS, Nevada.*
173. **Sulphur, Inferno**.—HUMBOLDT Co., Nevada.*
174. **Sulphur** (crystalized).—HUMBOLDT Co., Nevada.—S. D. Brastow.
175. **Sylvanite**.—TUOLUMNE Co., Cal.*
176. **Diallogite**, with **SILVER ORE**.—AUSTIN, Lander Co. Nevada.*
177. **Diallogite**.—AUSTIN, Lander Co., Nevada.*
178. **Anglesite**.—ELSWORTH, Nye Co., Nevada.*

179. **Diatomaceous Earth.**—Near VIRGINIA CITY, Nevada. Large quantities exported, to be used as a polishing powder, under the name of "Electro Silicon."*

180. **Malachite.**—NEVADA.*

181.—**Chrysocolla.**—ROULSTONE'S MINE, near BATTLE MOUNTAIN, Lander Co., Nevada.*

182. **Bindheimite.**—SERVIA MINE, Elko Co., Nev.*

183. **Jamesonite** ---NEVADA.*

184. **Stetefeldtite.**—NYE Co., Nevada.*

185. **Calcite** = *Travertine*.—ESMERALDA Co., Nevada.*

186. **Cuprite**, with NATIVE COPPER.—BATTLE MOUNTAIN, Lander Co., Nevada*

187. **Azurite.**—BELMONT, Nye Co., Nevada.*

188. **Calcite.**—JUSTICE MINE, COMSTOCK LEDGE, VIRGINIA, Nevada.*

189. **Calcite.**—JUSTICE MINE, COMSTOCK LEDGE, VIRGINIA, Nevada.—California State Geological Society.

190. **Cinnabar.**—STEAMBOAT SPRINGS, Washoe Co., Nevada. These springs have been long known, but have recently been developed into a quicksilver mine. Steam is evolved in large quantities, whence the name; the deposition of mercury is now going on. They present a new field for scientific study.*

191. **Pyrophyllite.**—GREASER GULCH, Maraposa Co., Cal.—Daniel Buck. (See No. 68.)

192. **Polybasite.**—AUSTIN, Lander Co., Nevada.*

193. **Travertine.**—MONO LAKE, Esmeralda Co., Nev.*

194. **Melaconite**?—BATTLE MOUNTAIN, Lander Co., Nevada.*

195. **Natron**.—BODIE DISTRICT, Esmeralda Co., Nev.*

196. **Bournonite**?—BATTLE MOUNTAIN, Lander Co., Nevada.*

197. **Hübne ite** = *Tungstate of Manganese*. — ENTERPRISE MINE, MAMMOTH DISTRICT, Nye Co., Nevada.*

198. **Freislebenite**. — PAYMASTER MINE, WARD DISTRICT, White Pine Co., Nevada.*

199. **Turquoise**.—COLUMBUS, Esmeralda Co., Nevada.*

200. **Cerussite**.—NYE Co., Nevada.*

201. **Calcite**=*Pisolite*.—BLACK ROCK DISTRICT, Nevada. See 156.—E. L. Montgomery.

202. **Lenzenite**, COPPER STAINED.—TRUCKEE RIVER, Nevada.*

203. **Clay Stones**, INFERNO.—HUMBOLDT Co., Nev.*

204. **Stephanite and Proustite**, in HALLOYSITE.—POOR MAN MINE, Oyhee Co., Idaho*

205. **Cuprite**.—HUMBOLDT COPPER MINING Co., Humboldt Co., Nevada.—Almarin B. Paul.

206. **Copper Ore**.—HUMBOLDT C. M. Co., Humboldt Co., Nevada.—Almarin B. Paul.

207. **Gypsum**.—ELSWORTH, Nye Co., Nevada.*

208. **Travertine**.—WHITE PINE Co., Nevada.—S. D. Brastow.

209. **Silver Ore**.—JACK RABBIT MINE, Lincoln Co., Nevada.—S. D. Brastow.

210. **Malachite and Calcite.**—SPRING VALLEY. White Pine Co., Nevada.—S. D. Brastow.

211. **Clay Stone.**—WHITE PINE CO. Nevada.—E. L. Montgomery.

212. **Anglesite.**—ILLINOIS MINE, near ELSWORTH, Nye Co., Nevada.*

213. **Chrysocolla.**—WHITE MOUNTAINS, Inyo Co, Cal.—A. Wingard.

214. **Argillaceous Dolomite.**—MOUNT CATHERINE, Napa Co., Cal.—Chas. Churchill, M. D.

215. **Steatite.**—Near FORBESTOWN, Butte Co., Cal.—Almarin B. Paul

216. **Hydraulic Cement.**—NAPA, Napa Co., Cal.—John T. Smith.

217. **Asbestos.**—DEL NORTE Co., Cal.—Chas. H. Denison.

218. **Chalcedony.**—SONORA TRAIL, Alpine Co., Cal.—A. Wingard.

219. **Silver Ore.**—NORTH STAR MINE, AUSTIN, Lander Co., Nevada.*

220. **Silver Ore.**—NORTH STAR MINE.—400-foot level.—AUSTIN, Lander Co., Nevada.*

221. **Silver Ore.**—MORRIS & CAPLE MINE, AMADOR DISTRICT, Lander Co., Nevada.*

222. **Silver Ore.**—ISABELLA MINE, AUSTIN, Lander Co., Nevada*

223. **Silver Ore.**—MANHATTAN MINE, AUSTIN, Lander Co., Nevada.*

224. **Silver Ore.**—HYKO MINE, Oregon Shaft, AUSTIN, Lander Co., Nevada.*

225. **Silver Ore.** - TROJAN MINE, GOLD HILL, NEVADA. This specimen is covered with *kustelite* (an alloy of silver and gold), a description of which will be found in Dana's Mineralogy, under the head of "Silver."--Trojan Mining Co.

226. **Native Silver.**—COMSTOCK LODGE, VIRGINIA, Nev.*

227. **Silver Ore?**—HARD CASH MINE, PIONEER DISTRICT, Pinal Co., Arizona.*

228. **Silver Ore.**—JACK SWILLING MINE, BLACK CANON, Yavapai Co., Arizona*

229. **Silver Ore.**—ILLINOIS MINE, ELSWORTH, Nye Co., Nevada.*—Assays \$200 per ton.

230. **Silver Ore.**—ILLINOIS MINE, ELSWORTH, Nye Co., Nevada.*—Assays \$30 to 120 per ton.

231. **Silver Ore.**—ILLINOIS MINE, ELSWORTH, Nye Co., Nevada.*—Assays \$84 per ton.

232. **Silver Ore.**—ILLINOIS MINE, ELSWORTH, Nye Co., Nevada.*—Assays \$320 per ton.

233. **Silver Ore.**—ILLINOIS MINE, ELSWORTH, Nye Co., Nevada.*—Assays \$420 per ton.

234. **Silver Ore.**—ILLINOIS MINE, ELSWORTH, Nye Co., Nevada.*—Assays \$1000 per ton.

235. **Silver Ore** — CUPEL & TIGER MINE, CERBAT DISTRICT, Hualapai Co., Arizona.*

236. **Copper-Silver Ore.**—TRENTON MINE, BATTLE MOUNTAIN, Lander Co., Nevada.*

237. **Silver Ore.**—PENNSYLVANIA MINE, PHILADELPHIA DISTRICT, Nye Co., Nevada.*

238. **Silver Ore.**—BARCELONA MINE, SPANISH BELT DISTRICT, Nye Co., Nevada.*—(See No. 170.)

239. **Silver Ore.**—NASH MINE, EL DORADO CAÑON, Lincoln Co., Nevada.*

240. **Silver Ore.**—LIBERAL MINE, SYLVANIA DISTRICT, Nye Co., Nevada.*

241. **Silver Ore.**—RYE PATCH MINE, Humboldt Co., Nevada.*

242. **Silver Ore.**—QUEEN CITY MINE, EL DORADO CAÑON, Lincoln Co., Nevada.*

243. **Silver Ore.**—Near RENO, Washoe Co., Nevada.*

244. **Silver Ore.**—WHITE & SHILLOH MINE, GALENA, Lander Co., Nevada.*

245. **Silver Ore.**—DAVIS MINE, White Pine Co., Nev.*

246. **Silver Lead Ore.**—BLACK MOUNTAIN, Esmeralda Co., Nevada.*

247. **Silver Ore.**—CENTENNIAL MINE, BLACK MOUNTAIN, Esmeralda Co., Nevada.*

248. **Silver Ore** —TRANSIT MINE, SYLVANIA DISTRICT, Nye Co., Nevada.*

249. **Silver Ore.**—BLUE DICK MINE, ALIDA VALLEY, Esmeralda Co., Nevada.*

250. **Silver Ore.**—TEM PIUTE DISTRICT, Lincoln Co., Nevada.*

251. **Silver Ore.**—ROVER MINE, EL DORADO CAÑON, Lincoln Co., Nevada.*

252. **Silver Ore.**—TUSCARORA MINE, Elko Co., Nev.*

253. **Silver Ore.**—PAYMASTER MINE, WARD DISTRICT, White Pine Co., Nevada.*

254. **Silver Ore.**—MONITOR MINE, BATTLE MOUNTAIN, Lander Co., Nevada.*

255. **Silver Ore.**—CINDERELLA MINE, ALIDA DISTRICT, Esmeralda Co., Nevada.*

256. **Silver Ore.**—SERVIA MINE, DELANO DISTRICT, Elko Co., Nevada.*

257. **Silver Ore.**—RAYMOND & FLY MINE, MEADOW VALLEY, Lincoln Co., Nevada.*

258. **Silver Ore.**—HOXIE MINE, WHITE PINE, Nevada.*

259. **Silver Ore.**—BADGER CONSOLIDATED MINE, GOOSE CREEK DISTRICT, Elko Co., Nevada.*

260. **Silver Ore.**—MARTIN WHITE MINE, 90 miles S.E. of WALES STATION, Nevada.*

261. **Silver Ore.**—FAY MINE, WHITE PINE, Nevada.*

262. **Silver Ore.**—ADDINGTON MINE, WHITE PINE, Nev.*

263. **Silver Ore.**—WHITE PINE Nevada.*

264. **Silver Ore.**—BOWMAN MINE, AUSTIN, Lander Co., Nevada.*

265. **Silver Ore.**—LONE STAR MINE, AUSTIN, Lander Co., Nevada.*

266. **Silver Ore.**—WHITE PINE, NEVADA.*

267. **Silver Ore.**—MOHAWK MINE, AUSTIN, Lander Co., Nevada.*

268. **Silver Ore.**—BELMONT, Nye Co., Nevada.*

269. **Silver Ore.**—OREGON MINE, AUSTIN, Lander Co., Nevada.*

270. **Silver Ore.**—EXCHEQUER MINE, WHITE PINE, NEVADA.*

271. **Silver Ore.**—“*Chloride Ore.*”—HIDDEN TREASURE MINE, WHITE PINE, NEVADA.*

272. **Silver Ore.**—GEDDES AND BERTRAND MINE, near EUREKA, Eureka Co., Nevada.*

273. **Silver Ore.**—SILVER PEAK, TEM PIUTE DISTRICT, Lincoln Co., Nevada.*

274. **Silver Ore.**—MOLLIE STARK MINE, COLUMBUS DISTRICT, Esmeralda Co., Nevada.*

275. **Silver Ore.**—BASE METAL RANGE, White Pine Co., Nevada.*

276. **Silver Ore.**—LOTA MINE, White Pine Co., Nev.*

277. **Silver Ore.**—"BLACK ROCK," White Pine Co., Nevada.*

278. **Silver Ore.**—EBERHARDT MINE, White Pine Co., Nevada.*

279. **Silver Ore.**—MORGAN & MUNCY MINE, REESE RIVER, Lander Co., Nevada.*

280. **Silver Ore.**—DEFIANCE MINE, REESE RIVER, Lander Co., Nevada.*

281. **Silver Ore.**—KING ALFRED MINE, REESE RIVER, Lander Co., Nevada.*

282. **Silver Ore.**—BELCHER MINE, COMSTOCK LODE, VIRGINIA CITY, Nevada.*

283. **Silver Ore.**—TRUE BLUE MINE, AMADOR DISTRICT, Nevada.

284. **Silver Ore.**—CONSOLIDATED VIRGINIA MINE, COMSTOCK LODE, VIRGINIA, Nevada.*

285. **Silver Ore.**—SAVAGE MINE, AUSTIN, Lander Co., Nevada.*

286. **Silver Ore.**—NORTH STAR MINE, ALSOP LEDGE, AUSTIN, Lander Co., Nevada.*

287. **Silver Ore.**—LADY BRYAN MINE, FLOWERY DISTRICT, Story Co., Nevada.*

288. **Silver Ore.**—HALE & NORCROSS MINE, COMSTOCK LODGE, VIRGINIA, Nevada.*

289. **Silver Ore.**—“SOUTH BARCELONA” MINE, SPANISH BELT DISTRICT, Nye Co., Nevada.*

290. **Silver Ore.**—ANDES MINE, COMSTOCK LODGE, VIRGINIA, Nevada.*

291. **Silver Ore.**—BLANDING MINE, FLOWERY DISTRICT, Story Co., Nevada.*

292. **Silver Ore.**—OPHIR MINE, COMSTOCK LODGE, VIRGINIA, Nevada.*

293. **Silver Ore.**—BLACK MOUNTAIN DISTRICT, Esmeralda Co., Nevada.*

294. **Silver Ore.**—PAYMASTER MINE, PEA VINE DISTRICT, Washoe Co., Nevada.*

295. **Silver Ore.**—DIANA MINE, AUSTIN, Lander Co. Nevada.*

296. **Silver Ore.**—MANHATTAN MINE, AUSTIN, Lander Co., Nevada.*

297. **Silver Ore.**—SARATOGA MINE, AUSTIN, Lander Co., Nevada.*

298. **Silver Ore.**—DOLLARHIDE MINE, AUSTIN, Lander Co. Nevada.*

299. **Silver Ore.**—GOULD & CURRY MINE, COMSTOCK LODGE, VIRGINIA, Nevada.*

300. **Silver Ore** (“SILVER SANDSTONE.”)—LEEDS MINE, Washington Co., Utah.*

301. **Silver Ore.**—MIDAS MINE, GOLD HILL, STORY CO., Nevada*

302. **Silver Ore.**—INDEPENDENCE LEDGE, AUSTIN, LANDER CO., NEVADA.—CHAS. E. SHERMAN.

303. **Cement**, with GOLD.—CAMP HALLECK, NEVADA.*

304. **Copper Ore.**—EL DORADO MINE, BATTLE MOUNTAIN, LANDER CO., NEVADA.*

305. **Stibnite.**—ANTIMONY M. CO., BATTLE MOUNTAIN, LANDER CO., NEVADA.*

306. **Lead Ore.**—MCDONALD MINE, BLACK MOUNTAIN, ESMERALDA CO., NEVADA.*

307. **Copper Ore.**—BATTLE MOUNTAIN, LANDER CO., NEVADA.*

308. **Chalcopyrite.**—AUSTIN, LANDER CO., NEVADA.*

309. **Azurite.**—AUSTIN, LANDER CO., NEVADA.*

310. **Copper Ore.**—BEVELHYMER MINE, PEA VINE DISTRICT, WASHOE CO., NEVADA.*

311. **Copper Ore.**—BUCHANAN, FRESNO CO., CAL.*

312. **Copper Ore.**—WICKENBURY, YAVAPAI CO., ARIZONA.*—Copper=56%.

313. **Silver Ore.**—GRAND PRIZE MINE, TUSCARORA, NEVADA.*

314. **Lead Ore.**—WHITE & SHILLOH MINE, GALENA, LANDER CO., NEVADA.*—(See No. 244.)

315. **Lead Ore.**—BLACK SWAN MINE, BLACK MOUNTAIN, ESMERALDA CO., NEVADA.*

316. **Lead Ore.**—JOE EARL MINE, BATTLE MOUNTAIN, LANDER CO., NEVADA.*

317. **Gold and Silver Ore.**—WIDE WEST MINE, AURORA, Esmeralda Co., Nevada.—Very rich in gold.—T. L. Bibbins.

318. **Quicksilver Ore.**—FLAGSTAFF MINE, SONOMA Co., Cal.*

319. **Quicksilver Ore.**—LAKE CO., Cal.*

320. **Quicksilver Ore.**—KEARSARGE MINE, LAKE CO. Cal.*

321. **Quicksilver Ore.**—GREAT EASTERN MINE, LAKE Co., Cal.*

322. **Quicksilver Ore.**—OCEANIC MINE, SAN LUIS OBISPO Co., Cal.*

323. **Quicksilver Ore.**—ORESTEAMBA MINE, SAN LUIS OBISPO Co., Cal.*

324. **Lignite.** SOUTHERN Cal.—J. W. Taliaferro.

325. **Copper Ore.**—VICTOIRE MINE, HUNTER'S VALLEY, Mariposa Co., Cal.—800 sacks assayed 20 per cent. Copper. Joseph Quierolo.

326. **Travertine.**—ANCIENT LAKE, BUENA VISTA, Kern Co., Cal.—Joseph Quierolo.

327. **Selenite.**—BUENA VISTA, Kern Co., Cal.—Joseph Quierolo.

328. **Quicksilver Ore.**—PINE MOUNTAIN, PINE FLAT, Sonoma Co., Cal.*

329. **Quicksilver Ore.**—SUNDERLAND MINE, SAN LUIS OBISPO, Cal.*

330. **Quicksilver Ore.**—PHOENIX MINE, LAKE Co., Cal.*

331. **Quicksilver Ore.**—CERRO BONETO MINE, Fresno Co., Cal.*

332. **Quicksilver Ore.** — SILVER BOW MINE, POPE VALLEY, Lake Co., Cal.*

333. **Quicksilver Ore.**—OAT HILL, near POPE VALLEY, Lake Co., Cal.*

334. **Selenite** after GALENA.—CERRO GORDO, Inyo Co., Nev*.

335. **Brown Jasper.**—DUTCH FLAT, Placer Co., Cal.*

336. **Rose Quartz.** — COMSTOCK LEDGE, VIRGINIA, Nev.†

337. **Travertine**;=Forms in grotesque masses in OWENS' GREAT LAKE, INYO CO., California, and is found in beds of ancient lakes of the same character in the Great Basin. See No. 326.†

338. **Tourmaline in QUARTZ.**—CALAVERAS CO., Cal.†

339. **Calcite.**—INYO CO., Cal.†

340. **Jasper.**—CALAVERAS CO., Cal.†

341. **Steatite.**—SANTA CLARA CO., Cal.†

342. **Azurite.** — ST. IGNATIUS MINE, CERRO GORDO, Inyo Co., Cal.†

343. **Chrysocolla.**—ENTERPRISE MINE, ARIZONA.†

344. **Enargite and Pyrites.**—MORNING STAR MINE.—MONITOR, Alpine Co., Cal.†

345. **Calcite.**—CERRO GORDO, Inyo Co., Cal.†

346. **Graphite.**—SAN FRANCISCO MOUNTAINS, SAN BERNARDINO CO., Cal.†

347. **Galena.**—CERRO GORDO, Inyo Co., Cal.†

Specimens marked thus (†) are from the private collection of Almarin B. Paul, and are loaned to the Commission.

348. **Quartz Crystals.** CALAVERAS CO., Cal.†
349. **Galena.** (*Argentiferous.*)—CATALINA ISLAND, Coast of California.†
350. **Antimony Ore.**—BINDHELMITE, (?) OREANA, Humboldt Co., Nev.†
351. **Quartz Crystals.**—COMSTOCK LEDGE, VIRGINIA, Nevada.†
352. **Dendritic Manganese.**—WHITE PINE, Nev.†
353. **Chrysocolla.**—EMMA MINE, Elko Co., Nevada.†
354. **Quartz=Silicified Wood.**—MEXICO.†
355. **Silicified Wood, 10 Varieties.**—DAYTON, Story Co., Nevada.†
356. **Tin Ore.**—TEMESCAL MOUNSAINS, San Bernadino Co., Cal.—(See No. 9.)†
357. **Silver Ore.**—KENTUCK MINE, COMSTOCK LODGE, VIRGINIA, Nevada.†
358. **Silver Ore.**—OPHIR MINE, COMSTOCK LODGE, VIRGINIA, Nevada.†
359. **Silver Ore.**—IMPERIAL MINE, COMSTOCK LODGE, GOLD HILL, Nevada.†
360. **Silver Ore.**—CROWN POINT MINE, COMSTOCK LODGE, VIRGINIA, Nevada.†
361. **Silver Ore, with KUSTELITE.**—YELLOW JACKET MINE, COMSTOCK LODGE, VIRGINIA, Nevada.†
362. **Antimony Ore, STIBNITE?**—HUMBOLDT CO., Nevada.†
363. **Sulphur.**—INFERNO, Humboldt Co., Nevada.†
364. **Pyrites.**—CHASE MINE, PRESCOT, Arizona.†

365. **Tufa?**—MONO Co., Cal.†
366. **Tufa?**—MONO Co., Cal.†
367. **Obsidian** (arrow-head), found 40 feet below the surface.—NEVADA Co., near GRASS VALLEY, Cal.†
368. **Fossiliferous Limestone.**—ESMERALDA Co., Nevada.†
369. **Gypsum**=*Selenite*.—MOLEGE BAY, Lower Cal.†
370. **Pyrites.**—MONITOR, Alpine Co., Cal.†
371. **Gypsum Crystals.**—Near VIRGINIA, Nevada.†
372. **Pyrolusite.**—TUOLUMNE Co. Cal.†
373. **Silver Ore.**—CONFIDENCE MINE, COMSTOCK LODE, VIRGINIA, Nevada.†
374. **Graphite.**—CARSON CITY, Ormsby Co., Nevada.?†
375. **Chrysocolla and Chalcedony.**—ECLIPSE MINE, Inyo Co., Cal.†
376. **Hematite, MICACEOUS**—ORMSBY Co., Nevada.†
377. **Graphite.**—NEVADA Co., Cal.†
378. **Band Porphyry?**—DAYTON, Storey Co., Nevada.†
379. **Wire, Silver and Stephenite.**—YELLOW JACKET MINE, COMSTOCK LODE VIRGINIA, Nevada.†
380. **Silicious Breccia, CEMENTED** with AZURITE.—CERRO GORDO, Inyo Co., Cal.†
381. **Carbonate of Copper**=*Azurite?*—GREEN MONSTER MINE, SCHELL CREEK, White Pine Co., Nevada.†
382. **Calcite.**—WHITE PINE, Nevada.†
383. **Chrysocolla.**—MARICOPA Co., Arizona.†

384. **Cinnabar.**—PHOENIX MINE, Lake Co., Cal.†
385. **Cinnabar.**—NEW ALMADEN, Santa Clara Co., Cal.†
386. **Cinnabar Breccia.**—LAKE Co., Cal.†
387. **Copper Ore.**—PEACOCK MINE, PEA VINE DISTRICT, Washoe Co., Nevada.†
388. **Copper Ore**=*Chalcopyrite*.—UNION MINE, COPPEROPOLIS, Calaveras Co., Cal.†
389. **Copper Ore.**—Near VISALIA, Tulare Co., Cal.†
390. **Copper Ore.**—METALIC MINE, CERRO GORDO, Inyo Co., Cal.†
391. **Copper and Silver Ore.**—PLUMAS Co., Cal.†
392. **Copper Ore.**—PEACOCK MINE, Plumas Co., Cal.†
393. **Copper Ore.**—BUENA VISTA MINE, PEA VINE DISTRICT, Washoe Co., Nevada.†
394. **Copper Ore.** (*Auriferous*).—VANCOUVER MINE, PEA VINE DISTRICT, Washoe Co., Nevada.†
395. **Copper Ore.**—DAY STATE MINE, PEA VINE DISTRICT, Washoe Co., Nevada.†
396. **Copper Ore.**—SOLEDAD, Los Angeles Co., Nev.†
397. **Copper Ore.**—MINERVA MINE, ROBINSON DISTRICT, White Pine Co., Nevada.†
398. **Copper Ore.**—WASHINGTON DISTRICT, Esmeralda Co., Nevada.†
399. **Copper Ore.**—RED CAP MINE, Del Norte Co., Cal.†
400. **Copper Ore.**—MOHAWK & MONTREAL MINE, EXCELSIOR DISTRICT, Nevada Co., Cal.†

401. **Quicksilver Ore.**—POLAR STAR MINE, SAN SI-MEON, San Luis Obispo Co., Cal.*

402. **Quicksilver Ore.**—MANHATTAN MINE, Lake Co., Cal.*

403. **Quicksilver Ore.**—SAN BERNARDINO Co., Cal.*

404. **Quicksilver Ore.**—LA PRIETOS MINE, Santa Barbara Co., Cal.*

405. **Quicksilver Ore.**—POMPOSA MINE, Santa Barbara Co., Cal.*

406. **Quicksilver Ore.**—OAKLAND, Sonoma Co., Cal.*

407. **Silver Ore.**—CHAMPION MINE, Eureka Co., Nev.*

408. **Quicksilver Ore.**—GUADALUPE MINE, Santa Clara Co., Cal.*

409. **Quicksilver Ore.**—60 miles N.E. LOS ANGELES, Cal.*

410. **Quicksilver Ore.**—WALL STREET MINE, Lake Co., Cal.*

411. **Cinnabar.**—OCEANIC MINE, San Luis Obispo Co. Cal.*

412. **Cinnabar.**—PINE FLAT, Sonoma Co., Cal.*

413. **Cinnabar.**—SHASTA Co., Cal.*

414. **Gold Ore.**—NEW COSO MINE, Inyo Co., Cal.—Rich in gold.*

415. **Gold**, with CINNABAR on CALCITE—Colusa Co., Cal.—This specimine should be carefully studied.—Almarin B. Paul.

416. **Cinnabar.**—NEW IDRIA MINE, Fresno Co., Cal.*

417. Silver Ore. (*Tetrahedrite*). — SURPRISE MINE, PANAMINT, Inyo Co., Cal. — Almarin B. Paul.

418. Silver Ore. — KEARSARGE MINE, Inyo Co., Cal. — Almirin B. Paul.

419. Gold in STEATITE. — PLACERVILLE, California.*

420. Gold Quartz. — GOVER M. & M. CO., NEAR DAYTON, Amador Co., Cal. — Shaft 700 feet; average yield, \$20 per ton. — Cyrus Wilson.

421. Gold Quartz. — KEYSTONE, Amador Co., Cal.*

422. Silver Ore. — EMIGRANT MINE, LEE DISTRICT, DARWIN, Inyo Co., Cal. — Daniel Buck.

423. Copper Ore. — EAGLE COPPER & SILVER M. CO., QUAIL HILL, Calaveras Co., Cal. — F. W. Utter.

424. Cinnabar and Native Mercury. — WALL STREET MINE, Lake Co., Cal. — (See No. 28 and 410.)*

425. Copper Ore. — NEAR LOWER LAKE, Lake Co., Cal.*

426. Galena. (*Argentiferous*). — NEW COSO MINE, Inyo Co., Cal. — (See No. 414. — Cal. State Geological Society.

427. Roscoelite, with GOLD. — GOLD MINE, near COLOMA, El Dorado Co., Cal. — Roscolite is a *vanadium mica*, and is extremely rare. First described by Dr. Jas. Blake, at a meeting of the San Francisco Microscopical Society, July 2d, 1874.*

428. Gold Ore. — ELECTRIC MINE, FEATHER RIVER, Butte Co., Cal. — Almarin B. Paul.

429. Gold Ore. — JAS. LICK MINE, STANISLAUS RIVER near SONOMA, Tuolumne Co., Cal. — Robt. Kirk.

430. Magnetite. — MCCLOUD RIVER, Shasta Co., Cal. — H. G. Hanks.

431. **Azurite and Cerusite.**—DIANA MINE, BLIND SPRINGS, Mono Co., Cal.—Jas. L. Trask.

432. **Silver Ore.**—NEW COSO MINE, Inyo Co., Cal.—(See No. 426.)—Cal. State Geological Society.

433. **Wulfenite.**—CERRO GORDO, Inyo Co., Cal.*

434. **Gold Quartz.**—HACKENDORN MINE, BLUE MOUNTAIN, Calaveras Co., Cal.*

435. **Silver Ore.**—ROMELIA MINE, SAN CARLOS, Inyo Co., Cal.—Jas. L. Trask.

436. **Stibnite.**—SAN BENETIO Co., Cal.—Robt. Kirk.

437. **Gold Ore.**—TALISMAN MINE, Amador Co., Cal.*

438. **Cuprite, with NATIVE COPPER.**—PEARL COPPER MINE, Del Norte Co., Cal.—Robt. Kirk.

439. **Dufrenoyite.**—UNION MINE, CERRO GORDO, Inyo Co., Cal.*

440. **Gold Ore.**—MARKLEY MINE, VOLCANO, Amador Co., Cal.*

441. **Hydraulic Cement.**—BENECIA, Solano Co., Cal.—John T. Smith.

442. **Gold Quartz.**—DUTCH BOYS' MINE, RAILROAD FLAT, Calaveras Co., Cal.*

443. **Wood Opal.**—LAKE Co., Cal.—John T. Smith.

444. **Quartz Sand.**—SEA BEACH, MONTEREY BAY, Monterey Co., Cal.—This sand is extensively used in San Francisco in the manufacture of glass.—Capt. W. J. Woodley.

445. **Quartz Sand.**—SPINKS' COAL MINE, 2 miles from LINCOLN, Placer Co., Cal.—Found associated with Nos. 19, 20, 21, 22, in beds from 2 to 4 feet thick.—Cook & Spinks.

446. **Aragonite.** BLACK HILLS, Dakota.*
447. **Pitch Stone.** -RAFT RIVER MOUNTAINS, Idaho.*
448. **Gold and Silver Ore.**—WHISKY GULCH MINE, CARSON DISTRICT, Owyhee Co., Idaho.—First ledge located in Silver City.*
449. **Silver Ore.** --EMMA MINE, LITTLE COTTON WOOD, Utah.*
450. **Silver Ore.** -COLD SPRINGS, Utah.
451. **Molybdenite.** -MEXICO. J. F. Johnson.
452. **Gold and Silver Ore.**—MARY BLANE MINE, CARSON DISTRICT, Owyhee Co., Idaho.*
453. **Cinnabar.**—UTAH.*
454. **Topaz.** --120 miles S.W. of SALT LAKE, Utah.*
455. **Silver Ore.**—MAY FLOWER MINE, EAST TINTIC, Utah.*
456. **Pyrargyrite. (?)**—MAGGIE MINE, FRANCONIA DISTRICT, Idaho.*
457. **Silver Ore.**—BAY STATE MINE, LITTLE MOUNTAIN DISTRICT, Owyhee Co., Idaho.*
458. **Native Silver.** - -MAHOGANY MINE, Owyhee Co., Idaho.*
459. **Volcanic Ash (?)**—ORO BLANCO DISTRICT, Arizona.*
460. **Silver-Copper Ore.**—FRANCO-AMERICAN MINE, ORO BLANCO DISTRICT, Arizona.—Derre, Voisard & Townsend.
461. **Silver Ore.**—VOISARA MINE, ORO BLANCO DISTRICT, Arizona.—Derre, Voisard & Townsend.

462. **Silver and Gold Ore.**—REX MONTIS MINE, KEARSAGE MOUNTAIN, Inyo Co.—Altitude, 12,500.—This ore is frozen throughout the mine, as far as at present developed; very rich in gold and silver.—D. Henshaw Ward.

463. **Gold Ore.**—AUSTERLITZ MINE, ORO BLANCO DISTRICT, Arizona; 14-foot vein.—Derre, Voisard & Townsend.

464. **Silver-Gold Ore.**—KEARSAGE MINE, KEARSAGE MOUNTAIN, Inyo Co., Cal.—S. Frank.

465. **Silver-Gold Ore.**—CLIFF MINE, KEARSAGE CO., Inyo Co., Cal.—S. Frank.

466. **Copper-Silver Ore.**—HOLDEN MINE, ORO BLANCO DISTRICT, Arizona.—Derre, Voisard & Townsend.

467. **Silver-Gold Ore.**—AGUA CALIENTA MINE, SINALOA, Mexico.—A. Fossara.

468. **Silver Ore.**—GAMBETTA MINE, LAS GUIJAS, ARIVACA DISTRICT, Arizona, 69-foot shaft.—D., V. & T.

469. **Silver Ore.**—ROCHAMBEAU MINE, LAS GUIJAS ARIVACA DISTRICT, Arizona.—D., V. & T.

470. **Copper Ore.**—DUNDERBERG MINE, ORO BLANCO DISTRICT, Arizona; 9-foot vein.—D., V. & T.

471. **Silver Ore.**—LAST CHANCE MINE, LAS GUIJAS ARIVACA DISTRICT, Arizona; 80 feet deep; very rich.—D., V. & T.

472. **Copper Ore.**—ARTHAUISA MINE, ORO BLANCO DISTRICT, Arizona.—D., V. & T.

473. **Silver Ore.**—LIBERTY MINE, ARIVACA DISTRICT, Arizona; 50-foot shaft.—D., V. & T.

474. **Silver Ore.**—SIR THOMAS WARE MINE, ARIVACA DISTRICT, Arizona.—D., V. & T.

475. **Silver Ore.**—ELIZABETH MINE, ORO BLANCO DISTRICT, Arizona.—A. Derre.

476. **Silver Ore.**—VALERIA MINE, LAS GUIJAS, ARIVACA DISTRICT, Arizona. This mine was anciently worked. A human skeleton was found in an old shaft, 20 feet deep, with tools of stone and copper.—D., V. & T.

477. **Silver Ore.**—NORMAND MINE, ORO BLANCO DISTRICT, Arizona.—D., V. & T.

478. **Silver Ore.**—BELLE FRANCE MINE, ORO BLANCO DISTRICT, Arizona.—D., V. & T.

479. **Silver Ore.**—RELIEF MINE, ARIVACA DISTRICT, Arizona.—D., V. & T.

480. **Gold Ore.**—FRENCH ZOUAVE MINE, ARIVACA DISTRICT, Arizona.—D., V. & T.

481. **Gold Ore.**—APACHE CHIEF MINE, ARIVACA DISTRICT, Arizona.—D., V. & T.

482. **Silver and Gold Ore.**—NELLIE DAVIS MINE, ORO BLANCO DISTRICT, Arizona.—D., V. & T.

483. **Gold Ore.**—SOLID WEALTH MINE, ORO BLANCO DISTRICT, Arizona.—D., V. & T.

484. **Gold Ore.**—GUIJAS PRIDE MINE, ARIVACA DISTRICT, Arizona.—D., V. & T.

485. **Silver-Lead Ore.**—SILVER HILL MINE, ORO BLANCO DISTRICT, Arizona.—D., V. & T.

486. **Gold Ore.**—GREAT MOGUL MINE, LAS GUIJAS, ARIVACA DISTRICT, Arizona.—D., V. & T.

487. **Silver Ore.**—GEN. GRANT MINE, ORO BLANCO DISTRICT, Arizona.—D., V. & T.

488. **Silver Ore.** (*Pyromorphite*).—SILVER EAGLE MINE, ARIVACA DISTRICT, Arizona.—D., V. & T.

489. **Silver Ore.**—LAFAYETTE MINE, GUIJAS, ARIVACA DISTRICT, Arizona.—D., V. & T.

490. **Silver Ore.**—BUENA VISTA MINE, GUIJAS, ARIVACA DISTRICT, Arizona.—D., V. & T.

491. **Silver-Lead Ore.**—KATIE PEASE MINE, CASTLE DOME DISTRICT, Arizona.—D., V. & T.

492. **Amethyst.**—ORO BLANCO DISTRICT, Arizona.—D., V. & T.

493. **Quartz.**—ORO BLANCO DISTRICT, Arizona.—D., V. & T.

494. **Silver Ore.**—GLOBE DISTRICT, Arizona.*

495. **Silver Ore.**—MIAMI MINE, GLOBE DISTRICT, Arizona.—A. Townsend.

496. **Silver Ore.**—TOWNSEND MINE, GLOBE DISTRICT, Arizona.—A. Townsend.

497. **Copper Ore.**—NEW REPUBLIC MINE, ORO BLANCO DISTRICT, Arizona.—D., V. & T.

498. **Silver Ore** (free silver).—OCEANIC MINE, GLOBE DISTRICT, Arizona.—A. Townsend.

499. **Copper Ore.**—DEL NORTE Co., Cal.—O. D. Squire.

500. **Silver Ore.**—WARSAW MINE, ORO BLANCO DISTRICT, Arizona.—D., V. & T.

501. **Cinnabar** in SANDSTONE. (*with microscopic section.*) —ALASKA.—Dr. E. C. Thatcher.

502. **Copper Ore.**—FALL CREEK COPPER MINE, Josephine Co., Oregon.*

502. **Lead Ore.**—MOUNT BENDLEBEN, Alaska.—Dr. E. C. Thatcher.

504. **Silver Ore.**—Near SALEM, Oregon.*

505. **Silver-Lead Ore.** — CAPITAL MINE, SANITAM RIVER, 50 miles from Salem, Oregon.*

506. **Antimonial Galena.**—ARCTIC MINE, Alaska.*

507. **Stream Cinnabar.**—BEAVER CREEK, Jackson Co., Oregon.*

508. **Cinnabar.**—JACKSONVILLE, Oregon.*

509. **Cryptomorphite** = *Priceite* = *Borate of Lime*—CURRY Co., Oregon.*

510. **Kaolin.**—BRITISH COLUMBIA.*

511. **Grossularite.**—SNOQUALMIE RIVER, Washington Territory.*

512. **Silver Ore.**—MONUMENTAL MINE, GRANITE CREEK, Grant Co Oregon.*

513. **Ceraryprite.**—BELMONT, Nye Co., Nevada.*

514. **Copper Ore.**—HOWE SOUND, British Columbia.*

515. **Silver Ore.**—REPUBLICAN MINE, CACACILLA DISTRICT, Lower California, Mexico.*

516. **Silver Ore. (?)**—FORT HOPE, British Columbia.*

517. **Quartz**=*Mocha Stone*.—ALEUTIAN ISLANDS.*

518. **Graphite,**—ALASKA.*

519. **Copper Ore.** — “QUEEN OF BRONZE” MINE, Josephine Co., Oregon.*

520. **Magnetite.**—DENNY’S CREEK, Washington Territory.*

521. **Tourmaline.**—SEATTLE, Washington Territory.*

522. **Scheelite.**—SEATTLE, Washington Territory.*

523. **Scneelite**, with TOURMALINE.—SEATTLE, Washington Territory.*

524. **Quartz**=*Silicified Wood*.—ALASKA.*

525. **Coal**.—UNGA ISLAND, Alaska.—Robt. Wingate.

526. **Realgar**.—ISLAND L, Washington Territory. Said to occur in great quantities.*

527. **Realgar**.—FIDALGO ISLAND, Washington Territory.—Chas. H. Denison.

528. "**Silver Mud**."—WASCO Co., Oregon. This singular substance is from "mud springs," or "mud volcanoes," and is very rich in silver. At first it was supposed to be an artificial preparation, made to induce speculation, but as the silver is in a state unlike any known mechanical or chemical product, it is now believed to be natural, although still uncertain.*

529. **Tschermignite**=*Animonia Alum.*—UTAH Co., Utah.*

530. **Chalcedony**.—TREASURE HILL, White Pine Co., Nevada.—E. L. Montgomery.

531. **Dendritic, Oxid of Manganese**.—TREASURE HILL, White Pine Co., Nevada.—E. L. Montgomery.

532. **Geocronite**. (?)—INYO MOUNTAINS, Inyo Co., Cal.†

533. **Impure Limestone**.—MONTEREY Co., Cal.—Captain W. J. Woodley.

534. **White Marble**.—MONTEREY Co., Cal.—Capt. W. J. Woodley.

535. **Wire Gold**, two specimens.—LA TROBE, Eldorado Co., Cal.—Loaned by Gordon Bishop.

536. **Silver Ore.**—EL PASO MINE, DURANGO, Mexico.
537. **Serpentine.**—CORRAL DE FERRA, Monterey Co., Cal.—Capt. W. J. Woodley.
538. **Silver Ore.**—CONCORDIA MINE, SINALOA, Mexico*
539. **Copper Ore.**—MEXICO.—N. P. Sheldon.
540. **Fossil.** (*Anchitherium*) (?)—MIOCENE TERTIARY, GRANT Co., Oregon.—Loaned by S. D. Brastow.
541. **Fossil,** UPPER JAW OF MAMMAL.—MIOCENE TERTIARY, Grant Co., Oregon.—Loaned by J. S. Bunnell.
542. **Paleozoic Fossil.** (*Eridophyllum*.) (?)—TREASURE HILL, White Pine Co., Nev.—E. L. Montgomery.
543. **Paleozoic Fossil.** --- TREASURE HILL White Pine Co., Nevada.—E. L. Montgomery.
- 544.—**Paleozoic Fossil.** (*Cyatophyllum*.) (?)—TREASURE HILL, White Pine Co., Nevada.—E. L. Montgomery.
- 545 **Paleozoic Fossil.** (*Coral*.) — TREASURE HILL, White Pine Co., Nev.—E. L. Montgomery.
546. **Paleozoic Fossil,** CRINOID STEMS. (?)—DELANO, MONTEREY DISTRICT, Elko Co., Nevada.—S. D. Brastow.
547. **Fossil Leaves.**—TERTIARY, TABLE MOUNTAIN, TUOLUMNE Co., Cal.—J. L. Johnson.
548. **Polybasite.**—AUSTIN, Lander Co., Nevada.†
549. **Porphyry.**—SUTRO TUNNEL, VIRGINIA, Nevada.†
550. **Silver Ore.** — POTOSI MINE, WARD DISTRICT, WHITE PINE DISTRICT, Nevada.†
551. **Silver Ore.**—MAJENDIE MINE, ARNOLD LEDGE, CEDAR VALLEY DISTRICT, Mohave Co., Arizona.*
552. **Silver Ore.**—PECK MINE, Yavapai Co., Arizona.*

553. **Silver Ore.**—SILVER KING MINE, Arizona.*
554. **Silver Ore.**—HACKBERRY MINE, PEACOCK RANGE, Mohave Co., Arizona.*
555. **Silver Ore.** — PINAL MINE, GLOBE DISTRICT, Pinal Co., Arizona.*
556. **Silver Ore.**—SILVER FLAKE MINE, Yavapai Co., Arizona.*
557. **Silver Ore.**—RESCUE MINE, Pinal Co., Arizona.*
558. **Silver Ore.** — COOK'S CAÑON, Yavapai Co., Arizona.*
559. **Silver-Lead Ore.** (*Anglesite and Galena*).—CASTLE DOME DISTRICT, Arizona.*
560. **Silver Ore.**—SILVER PRINCE MINE, Arizona.*
561. **Silver Ore.**—GUAJATA MINE, Arizona.*
562. **Copper Ore.**—PLANET MINE, WILLIAM'S FORK, COLORADO RIVER, Arizona.*
563. **Litharge.**—PINAL MINING DISTRICT, Arizona.—Tons of this material found on the surface of the ground; thought by some to be natural, by others to be the product of ancient furnaces. Dana mentions its occurrence in Mexico.—See Dana's Mineralogy, 5th Edition, fol. 163, under head of "Massicot."*
564. **Pyrope.**—From the desert, NORTHERN ARIZONA. Occurs in considerable quantity with peridot and rolled quartz pebbles.*
565. **Cuprite.**—MUNRO MINE, Arizona.*
566. **Cinnabar, Cuprite and Chrysocolla.**—Arizona.*
567. **Copper Ore, Malachite.**—GRAND GULCH, Arizona.*

568. **Erubescite.**—NACASARA MINE, SONORA, Mexico.*
569. **Native Copper.**—SAUCE MINE, LOWER CALIFORNIA, Mexico.*
570. **Silver Ore.**—SOLEDAD MINE, 80 miles north of MAZATLAN, Mexico.*
571. **Beauxite.**—MEXICO.*
572. **Silver Ore.**—BLACK EAGLE MINE, Arizona.*
573. **Topaz.**—Found with stream tin; DURANGO, Mexico.*
574. **Silver Ore.**—DEL RAYS MINE, DURANGO, Mexico.*
575. **Stream Tin.**—DURANGO, Mexico.*
576. **Fire Opal.**—ZIMAPAN, Mexico.*
577. **Opal.**—POLAHO SPRINGS, Colorado.*
578. **Galena.**—CONSOLIDATED REFORMA MINE, MULEJE DISTRICT, LOWER CAL., Mexico.*
579. **Malachite.**—LOWER CAL., Mexico.*
580. **Gold Quartz.**—VIRTUE MINE, Baker Co., Oregon.*
581. **Gold Quartz.**—EUREKA MINE, SILVER CITY, Idaho.*
582. **Gold Quartz.**—BLACK EAGLE MINE, CARSON DISTRICT, Owyhee Co., Idaho.*
583. **Gold Quartz.**—GOLDEN CHARIOT MINE, Owyhee Co., Idaho.*
584. **Graphite.**—MEXICO.*
585. **Gold Ore.**—OPHIR MINE, DEADWOOD, BLACK HILLS, Decota.*

586. **Gold Ore.**—GOLDEN TERRY MINE, DEADWOOD, BLACK HILLS, Decota.*

587. **Gold Ore.**—HOME STAKE MINE, LEAD CITY, BLACK HILLS, Decota.*

588. **Tetrahedrite.**—MEXICO.*

589. **Silver Ore.**—SINALOA, Mexico.*

590. **Obsidian** (mistaken for coal.)—SONORA, Mexico.*

591. **Argentite.**—Near ACAPULCO, Mexico.*

592. **Gold Ore.**—OPHIR MINE, DEADWOOD, BLACK HILLS, Decota.*

593. **Copper Ore.**—LYNX CREEK, Yavapai Co., Arizona*

594. **Cerargyrite** = *Chloride of Silver*.—GLOBE DISTRICT, PINAL CO., Arizona.*

595. **Cerargyrite** = *Chloride of Silver* (microscopic crystals.)—RAYMOND & ELY MINE, ELY DISTRICT, LINCOLN Co., Nevada.*

596. **Cuprocheelite**, with TOURMALINE. — Near LA PAZ, LOWER CAL., Mexico.*

597. **Stromyrite.**—PINAL CO., Arizona.*

598. **Wulfenite.**—CERBAT, Arizona.*

599. **Native Silver.** — STONEWALL JACKSON MINE, Arizona.*

600. **Embolite.** (?)—CERBAT, Arizona.*

601. **Hubnerite.** (?)—ARIZONA.*

602. **Obsidian.**—Near PRESCOTT, Arizona.—Mr. Evens, Bulletin Office.

603. **Gypsum**.—Near PRESCOTT, Arizona.—Mr. Evens, Bulletin Office.

604. **Cerargyrite** (microscopic crystals).—MODOC CHIEF MINE, Inyo Co., Cal.*

605. **Malachite**.—ARIZONA.*

606. **Cerargyrite Crystals**.—SILVER PRINCE MINE, Arizona.*

607. **Zinkenite**, with GALENA, Arizona.*

608. **Minium**.—ARIZONA.*

609. **Silver Ore**.—IRATABA MINE, Arizona.*

610. **Native Silver**.—EL SOCORRO MINE, MORELOS DISTRICT, CHIHUAHUA, Mexico*

611. **Silver Ore**.—QUINTERO MINE, SONORA, Mexico.*

612. **Magnetite**. (*Octahedral*).—DURANGO, Mexico.*

613. **Grossularite**.—MEXICO.*

614. **Silver Ore**. — PROMONTORIO MINE, SINALOA, Mexico.*

615. **Hematite**.—WEAVER DISTRICT, Arizona.*

616. **Silver Ore**.—SAN JOSE MINE, SAN ANTONIO DISTRICT, LOWER CAL., Mexico.*

617. **Gypsum**.—ST. MARTIN'S ISLAND, GULF OF CAL.*

618. **Silver Ore**.—REFUGO MINE, CONETO, DURANGO, Mexico.*

619. **Silver Ore**.—MUSIDORA MINE, Mexico.*

620. **Silver Ore**.—DURANGO, Mexico.*

621. **Silver Ore**.—HIGHLANDER MINE, PANAMINT, Inyo Co., Cal.*

622. **Silver Ore.**—EMMA MINE, PANAMINT, Inyo Co., Cal.*

623. **Silver Ore.**—GRAND MINE, COSO, Inyo Co., Cal.*

624. **Silver Ore.**—ROMELIA MINE, SAN CARLOS, Inyo Co., Cal. (see No. 435.) *

625. **Silver Ore.**—CHARLOTTE MINE, COSO, Inyo Co. Cal.*

626. **Silver Ore.**—ST. LUCAS MINE, CERRO GORDO, Inyo Co., Cal.*

627. **Silver Ore.** — “UNKNOWN ” MINE, PANAMINT, Inyo Co., Cal.*

628. **Silver Ore.**—SUNRISE MINE, PANAMINT, Inyo Co., Cal.*

629. **Silver Ore.**—HURON MINE, PANAMINT, Inyo Co., Cal.*

630. **Silver Ore.**—PANAMINT MINE, PANAMINT, Inyo Co., Cal.*

631. **Silver Ore.**—FIGARO MINE, PANAMINT, Inyo Co., Cal.*

632. **Silver Ore.** — WASHINGTON MINE, NEW COSO, Inyo Co., Cal,

633. **Lead Ore, (Anglesite and Galena.)**—UNION MINE, CERRO GORDO, (see No. 17,) Inyo Co., Cal.*

634. **Silver Ore.**—SHEBA MINE, PANAMINT, Inyo Co., Cal.*

635. **Silver Ore.**—JACOB'S WONDER MINE, PANAMINT, Inyo Co., Cal.

636. **Silver Ore.** — WYOMING MINE, PANAMINT, Inyo Co., Cal.*

637. **Silver Ore.**—DEATH VALLEY MINE, PANAMINT, Inyo Co., Cal.*

638. **Silver Ore.**—STEWART'S WONDER MINE, PANAMINT, Inyo Co., Cal.*

639. **Silver Ore.**—TWILIGHT MINE, PANAMINT, Inyo Co., Cal.*

640. **Silver Ore.**—HOOVER MINE, SAN CARLOS, Inyo Co., Cal.*

641. **Silver Ore.**—"GREAT WESTERN" MINE, PANAMINT, Inyo Co., Cal.*

642. **Silver Ore.**—GUN SIGHT MINE, PANAMINT, Inyo Co., Cal.*

643. **Silver Ore.**—NORTH STAR MINE, PANAMINT, Inyo Co., Cal.

644. **Silver Ore.**—HOME STAKE MINE, PANAMINT, Inyo Co., Cal.*

645. **Silver Ore.**—ROSE SPRINGS MINE, PANAMINT, Inyo Co., Cal.*

646. **Silver Ore.**—SURPRISE MINE, PANAMINT, Inyo Co., Cal.*

647. **Silver Ore.**—BELMONT MINE, CERRO GORDO, Inyo Co., Cal.*

648. **Silver Ore.**—LYDIA MINE, PANAMINT, Inyo Co., Cal.*

649. **Silver Ore.**—CLIMAX MINE, PANAMINT, Inyo Co., Cal.*

650. **Silver Ore.**—DON JUAN MINE, PANAMINT, Inyo Co., Cal.*

651. **Silver Ore.**—MINERAL KING MINE, MINERAL KING DISTRICT, Tulare Co., Cal.*

652. **Silver Ore.**—PLUTO'S PET MINE, SAN CARLOS, Inyo Co., Cal.*

653. **Silver Ore.**—SILVER SPROUT MINE, Inyo Co., Cal.—Silver Sprout Mining Company.

654. **Silver Ore.**—ECLIPSE MINE, Inyo Co., Cal.*

655. **Silver Ore.**—COMANCHE MINE, BLIND SPRINGS, Mono Co., Cal.*

656. **Silver Ore.**—ALABAMA MINE, BLIND SPRINGS, Mono Co., Cal.*

657. **Silver Ore.**—WHITE CHIEF MINE, MINERAL KING DISTRICT, Tulare Co., Cal.*

658. **Silver Ore.**—BUTTE SILVER MINE, HUNTER'S VALLEY, Mariposa Co. Cal.*

659. **Silver Ore.**—MINNIETTA BELLE MINE, LOOKOUT DISTRICT, Inyo Co., Cal.*

660. **Silver Ore.**—EXCHEQUER MINE, Alpine Co., Cal.*

661. **Silver Ore.** — CUMMINGS MINE, Kern Co., Cal*

662. **Silver Ore.**—CINCINNATI MINE, SHASTA, Shasta Co., Cal.*

663. **Silver Ore.**—WILSON MINE, BLIND SPRINGS, Mono Co., Cal.*

664. **Silver Ore.** (?)—PEPPERWOOD MINE, ST. HELENA, Napa Co., Cal.*

665. **Silver Ore.**—CHICAGO MINE, SHASTA Co., Cal.*

666. **Silver Ore.**—KALLANGER MINE, Shasta Co., Cal.*

667. **Silver Ore.**—AL BUNNELL MINE, KERNVILLE, Kern Co., Cal.*

668. **Silver Ore.**—CENTER MINE, Inyo Co., Cal.*

669. **Silver Ore.**—BLACK WOLF MINE, MINERAL KING DISTRICT, Tulare Co., Cal.*

670. **Silver Ore.**—KERRICK MINE, BLIND SPRINGS DISTRICT, Mono Co., Cal.—Comanche Mining Co.

671. **Silver Ore.** (?)—CALISTOGA MINE, ST. HELENA, Napa Co., Cal.*

672. **Silver Ore.**—BUENA SWERTA MINE, CERRO GORDO, Inyo Co., Cal.*

673. **Silver Ore.**—INDIAN GULCH MINE, Mariposa Co., Cal.*

674. **Silver Ore.**—EUREKA MINE, BLIND SPRINGS, Mono Co., Cal.*

675. **Gold Ore.**—AMADOR MINE, SUTTER CREEK, Amador Co., Cal.*

676. **Gold Ore.**—NEVADA MINE, Nevada Co., Cal.*

677. **Gold Ore.**—GOLDEN CHARIOT MINE, San Diego Co., Cal.*

678. **Gold Ore.**—MEADOW VALLEY, Plumas Co., Cal.*

679. **Gold Ore.**—PITTSBURG MINE, DEAD MAN'S FLAT, Nevada Co., Cal.*

680. **Gold.**—CARRY HALE HYDRAULIC MINE, HENRY'S DIGGINS, El Dorado Co., Cal.—F. W. Van Reynegom.

681. **Gold Ore.**—ROUGH AND READY MINE, GRASS VALLEY, Nevada Co., Cal.*

682. **Gold Ore.**—LA CROSS MINE, GRASS VALLEY, Nevada Co., Cal.*

683. **Gold Ore.**—APP MINE, Tuolumne Co., Cal.*
684. **Gold Ore.**—GREEN MINE, AUBURN, Placer Co., Cal.*
685. **Gold Ore.**—PETTICOAT MINE, Calaveras Co., Cal.*
686. **Gold Ore.**—GREAT WESTERN MINE, GRASS VALLEY, Nevada Co., Cal.*
687. **Gold Ore.**—BILLY WILLIAMS MINE, San Barnardino Co., Cal.*
688. **Gold Ore.**—COLFAX, Nevada Co., Cal.*
689. **Gold Ore.**—CEDARBERG MINE, El Dorado Co., Cal.*
690. **Gold Ore.**—MANTER MINE, Near AUBURN, Placer Co., Cal.*
691. **Gold Ore.**—WOODHOUSE MINE, SANDY GULCH, TUOLUMNE RIVER, Calaveras Co., Cal.*
692. **Gold "Sulphurets."**—SAN BUENAVENTURA MINE, Los Angeles Co., Cal.*
693. **Gold Ore.**—VIRGINIA MINE, GRASS VALLEY, Nevada Co., Cal.*
694. **Gold Ore.**—HOPE MINE, Calaveras Co., Cal.*
695. **Gold Ore.**—SPRING HILL MINE, GRASS VALLEY, Nevada Co., Cal.*
696. **Gold Ore.**—COE MINE, GRASS VALLEY, Nevada Co., Cal.*
697. **Gold Ore.**—CANADA MINE, SUTTER CREEK, Amador Co., Cal.*
698. **Gold Ore.**—MCLENNAN MINE, GRASS VALLEY, Nevada Co., Cal.*

699. **Gold Ore.**—JOHN FRANKLIN MINE, JACKSON, Amador Co., Cal.*

700. **Gold Ore.**—SHIPLEY MINE, Near AUBURN, Placer Co., Cal.*

701. **Gold Ore.**—ST. LAWRENCE MINE, Near AUBURN, Placer Co., Cal.*

702. **Gold Ore.**—IDAHO MINE, GRASS VALLEY, Nevada Co., Cal.*

703. **Gold Ore.**—GREENHORN MINE, GRASS VALLEY, Nevada Co., Cal.*

704. **Gold Ore.**—BULLION MINE, Nevada Co., Cal.*

705. **Gold Ore.**—EUREKA MINE, GRASS VALLEY, Nevada Co., Cal.*

706. **Gold Ore.**—ANDERSON FLAT, Calaveras Co., Cal.*

707. **Gold Ore.**—FAVORITE MINE, GRASS VALLEY, Nevada Co., Cal.*

708. **Pyrites**, with FREE GOLD.—EL DORADO Co., Cal.—The gold on this specimen occurs in globules, and seems to have been squeezed out of the crystals in obedience to some unexplained law. The specimen is worthy of careful study.*

709. **Gold Ore.**—HIGGINS MINE, GRASS VALLEY, Nevada Co., Cal.*

710. **Gold Ore.**—CRATER MINE, Near AUBURN, Placer Co., Cal.*

711. **Gold Ore.**—KEYSTONE MINE, Amador Co., Cal.*

712. **Gold Ore.**—IRVING MINE, WHITE PINE Nevada.*

713. **Gold Ore.**—SHEEP RANCH MINE, Near SAN ANDREAS, Calaveras Co., Cal.*

714. **Gold** in CALCITE.—MONO CO., Cal.—This is an interesting specimen, a study of which may throw some light on the deposition of gold, as it will be seen that it is deposited on the wall-rock apparently by the same agencies which produced the calcite.*

715. **Gold Ore**.—SOULSBY MINE, Tuolumne Co., Cal.*

716. **Gold Ore**.—SANFORD'S MINE, GRASS VALLEY, Nevada Co., Cal.*

717. **Gold Ore**.—DEADWOOD CREEK, Trinity Co., Cal.*

718. **Gold Ore**.—JENNIE EPSTEIN MINE, GRASS VALLEY, Nevada Co., Cal.*

719. **Gold Ore**.—GOLD TUNNEL, GRASS VALLEY, Nevada Co., Cal.*

720. **Gold Ore**.—BIG BLUE MINE, Near KERNVILLE, Kern Co., Cal.*

721. **Gold** in PYROLUSITE.—BANGHART MINE, 10 miles from Shasta, Shasta Co., Cal.*

722. **Gold Ore**.—HESLIP MINE, Tuolumne Co., Cal.*

723. **Gold Ore**.—ST. PATRICK MINE, AUBURN, Placer Co., Cal.*

724. **Gold Ore**.—VIRGINIA MINE, 20 miles from MARYSVILLE, Yuba Co., Cal.*

725. **Gold Ore**.—CONFIDENCE MINE, Near SONORA, Tuolumne Co., Cal.*

726. **Gold Ore**.—CAMBRIDGE MINE, GRASS VALLEY, Nevada Co., Cal.*

727. **Gold Ore**.—WASHINGTON MINE, Near BROWN'S VALLEY, Yuba Co., Cal.*

728. **Gold Ore.**—OCEOLA MINE, Near SPENCERVILLE, Nevada Co., Cal.*

729. **Gold in QUARTZ.**—GRASS VALLEY, Nevada Co., Cal.*

730. **Gold Ore.**—ALLISON FRANKLIN MINE, GRASS VALLEY, Nevada Co., Cal.*

731. **Gold Ore.**—NEW YEAR MINE, Nevada Co., Cal.*

732. **Gold Ore.** — ORLEANS MINE, GRASS VALLEY, Nevada Co., Cal.*

733. **Gold Ore.**—GOLDEN EAGLE MINE, AUBURN, Placer Co., Cal.*

734. **Cement, with GOLD.**—CHINESE CAMP, Tuolumne Co., Cal.*

735. **Gold Ore.**—CENTENNIAL MINE, GRASS VALLEY, Nevada Co., Cal.*

736. **Gold and Silver Ore.**—POE DISTRICT, near RENO, Washoe Co., Nevada.*

737. **Gold Ore.**—NORAMBAGUA MINE, GRASS VALLEY, Nevada Co., Cal.*

738. **Gold Ore.**—MOUND MINE, VINING CREEK, PALMETTO DISTRICT, Mono Co., Cal.*

739. **Gold Ore.**—STANDARD MINE, BODIE, Mono Co., Cal.*

740. **Gold Ore**—*Tellurium?*—PLUMBAGO MINE, MINNESOTA, Sierra Co., Cal.*

741. **Fossil Leaves.**—Near SEATTLE, W. T.—J. A. Suffern.

742. **Realgar.**—Near SEATTLE, W. T.—J. A. Suffern.

743. **Silicified Wood.**—Near SEATTLE, W. T.—J. A. Suffern.

744. **Magnetite.**—25 miles east of SEATTLE, W. T.—J. A. Suffern.

745. **Travertine.**—SEATTLE, W. T.—J. A. Suffern.

746. **Fossils.**—Near SEATTLE, W. T.—J. A. Suffern.

747. **Fossil.**—CAJON PASS, San Bernardino Co.—I. S. Allen.

748. **Fossils.**—RED BLUFF, Tehama Co.—S. W. Collins.

749. **Molybdenite.** (?)—EUREKA, Nevada.*

750. **Fossil**—*Mytilus Californianus*, *Con.* — SALINAS, Monterey Co. Cal.—H. O. Lang.

751. **Petrified Guano** (so called.)—RAZA ISLAND, GULF OF CAL., MEXICO. Said to contain large quantities of Phosphate of Lime.—A. Willard, U. S. Consul, Guaymas.

752. **Scheelite.**—Near SEATTLE, W. T.—J. A. Suffern.

753. **Fossil** (*Mammalian*).—JOHN DAY RIVER, Grant Co., Oregon, 50 miles northwest of CANYON CITY, and 150 miles southeast from the DALLES.—Loaned by S. D. Brastow.

754. **Fossils** (*Mammalian*).—From JOHN DAY RIVER, Grant Co., Oregon, 50 miles northwest of CANYON CITY, and 150 miles southeast from the DALLES.—These interesting specimens are loaned to the Commission by Leander S. Davis, with the understanding that they are subject to his disposal at the close of the Exposition.

755. **Fossils.**—From the FOSSIL HORSE BED, on COTTONWOOD CREEK, JOHN DAY VALLEY, Grant Co., Oregon, 156 miles southeast from the DALLES.—Loaned by Leander S. Davis, upon the same terms as stated in No. 754.

756. **Fossils.**—From the LONE ROCK VALLEY, ROCK CREEK, Wasco Co., Oregon, 125 miles east of the DALLES, and 80 miles northwest from CANYON CITY, Grant Co.—Loaned by Leander S. Davis, upon the same terms as stated in No. 754.

757. **Copper Ore**=*Cuprite*. --LOW DIVIDE, Del Norte Co Cal.*

758. **Calcite.** --INYO CO., Cal.*

759. **Copper Ore.**—GREEN MONSTER MINE, Inyo Co., Cal.*

760. **Telluric Ore of Gold.** --MELONES CONSOL. MINING CO., CARSON HILL, Calaveras Co., Cal.—From the Company.

761. **Magnetite**, after PYRITE. —ARMENTINE MINE, Plumas Co., Cal.—Dr. D. Ernest Melliss.

762. MORNING STAR COPPER MINE, 1500 feet—ROCKLAND DISTRICT, Del Norte Co., Cal.—Kirk & Wood.

763. **Silver Ore.** (?) --CALISTOGA, Napa Co., Cal.*

764. **Gold Ore.**—SPRING HILL MINE, Amador Co., Cal.*

765. **Gold Ore.**—K. K. MINE, EUREKA, Nevada.—K. K. Company.

766. **Gold Ore.**—NEW YEAR MINE, NEVADA DISTRICT, Nevada Co. Cal.*

767. **Gopper Oer**= *Azurite*.—TIDAL WAVE MINE, Humboldt Co., Nevada.†

768. **Cement**, with GOLD.—ORO CONSOLIDATED MINE, Near FORREST HILL, Placer Co., Cal.*

769. **Copper Ore** = *Cuprite*.—DIAMOND MINE, LOW DIVIDE, Del Norte Co., Cal.*

770. **Limestone Breccia.**—MONTEREY Co., Cal.—Capt. W. J. Woodley.

771. **Micaceous Iron**, in which IODYRITE may be seen under the microscope.—This very singular mineral is said, by Mr. Henry Sewell, to occur in Copiapo, Chile. It is very rich in silver.—ARIZONA.

772. **Micaceous Iron**, with IODYRITE.—THE same as 771, roasted.

773. **Copper Ore.** — NEVADA CON. MINE, BATTLE MOUNTAIN, Lander Co., Nevada.*

774. **Durangite.**—DURANGO, Mexico.*

775. **Beach Sands.**—GOLD BLUFF, Humboldt Co., Cal. At this interesting locality the sands are worked with profit for the gold they contain. When discovered, the shore was yellow with gold, which caused the Gold Bluff excitement, which is historical. The gold occurs in extremely thin flakes, which are difficult to separate from the black sand. Many attempts have been made to overcome the difficulty, but with only partial success.—David Wildér.

776. **Black Sand.**—From GOLD BLUFF, Humboldt Co. Cal. Concentrated from No. 775.

777. **Gold.**—GOLD BLUFF, Humboldt Co., Cal. Washed from No. 775.*

778. **Silver Ore**, POTOSI No. 3.—KEARSARGE, Inyo Co., Cal.—Kearsarge Mining Company.

779. **Chrysocolla**, (*Argentiferous*). — RAMBOZ MINE, GLOBE DISTRICT, Arizona.—J. M. Redway.

780. **Chalcopyrite**, said to be auriferous. — HARD SCRABBLE MINE, GLOBE DISTRICT, Arizona.—J. M. Redway.

781. **Silicious Deposit.** — YELLOW STONE GEYSERS.
—Loaned by S. D. Brastow.

782. **Silver Ore.**—McMILLAN MINE, GLOBE DISTRICT,
Arizona.—J. M. Redway.

783. **Embolite**, with CERUSITE and MINIMUM. (?)—MEXI-
CAN MINE, GLOBE DISTRICT, Arizona.—J. M. Redway.

784. **Silver Ore.**—HIDDEN TREASURE MINE, GLOBE DIS-
TRICT, Arizona.—J. M. Redway.

785. **Silver Ore.**—CASOCHELLA, Lower Cal.—Antonio
Bianchi.

786. **Cerussite.** (?) *Argentiferous.*—ROSALIE MINE, GLOBE
DISTRICT, Arizona.—J. M. Redway.

787. **Malachite**, *Argeniferous.*—GLOBE DISTRICT, Ariz-
ona.—J. M. Redway.

788. **Azurite.** *Auriferous* (?) — BLUE JOHNNY MINE,
GLOBE DISTRICT, Arizona —J. M. Redway.

789. **Silver Ore** = *Chloride.*—EBERHARDT MINE, White
Pine Co., Nevada. Assay value of silver \$13,101.—Loaned
By S. D. Brastow.

790. **Fossils**—From SALINAS, Monterey Co., Cal.—H.
O. Lang.

791. **Lithomarge.** (?)—Said to contain 12% to 15% of
COPPER.—EAGLE COPPER MINE, Calaveras Co., Cal.*

792. **Samples of Copper Ore**, From SAN FRANCISCO
COPPER MINE.—SPENCERVILLE, Nevada Co., Cal. Ledge said
be 120 feet thick, and the ore in sight to assay 6½% copper.
The mine is within 12 miles of R. R. Station.—From the
Company.

793. **Cement Copper**=COPPER 91%.—Obtained by precipitation from solution, after roasting in heaps, from No. 792. The company have extensive works, and are successfully producing copper.

794. No. 792 heap roasted.—SAN FRANCISCO COPPER MINE, SPENCERVILLE, Nevada Co., Cal.

795. **Shell Rock**.—MONTEREY Co., Cal.—Capt. W. J. Woodley.

796. **Mountain Leather**=*Amphibol*.—TUOLUMNE Co., Cal.—W. R. Shaw.

797. **Fossils**.—From SANTA CRUZ Co., altitude 2,000 feet.—H. B. Phillips.

798. **Copper Ore**.—PECK'S MINE, COPPER HILL, Shasta Co., Cal.*

799. **Mica Schist**.—GOLD LAKE, Sierra Co., Cal. In 1849 and subsequently, in 1850, the discovery of this mineral led to the Gold Lake excitement, the Mica being mistaken for gold.—Cal. State Geological Society.

800. **Native Silver**, covered with CERARGYRITE and EMBOLITE, VALERIA MINE, LOS GUIGAS, ARIVACA DISTRICT, Arizona—(See No. 476. D. V. & S. This specimen is worthy of a careful examination.

801. **Cinnibar**. — Near COULTERVILLE, Mariposa Co., Cal.—Occurs in isolated crystals associated with gold. This sample was washed from the pulverized rock, but under the microscope will be seen to be composed of broken crystals.

802. **Cinnibar**.—Concentrated from the solfataric formation at the sulphur bank.—LAKE Co Cal.—See 37, 38, 39.*

803. **Beach Sands**, rich in GOLD.—HUMBOLDT BAY, Humboldt Co., Cal.—Cal. State Geological Society.

804. **Iron, Sand and Gold.** - HUMBOLDT Co., Cal. Concentrated from No. 803.- Cal. State Geological Society.

805. **Concentration from Hydraulic Washings.**—NEVADA Co, Cal.*

806. **Embolite.**—GLOBE DISTRICT, Arizona.—J. M. Redway.

807. **Stromyrite.** (?) — MIAMI MINE, GLOBE DISTRICT, Arizona.—J. M. Redway.

808. **Micaceous Iron,** with IODYRITE.—GLOBE DISTRICT, Arizona.—(See No. 772 and *Scientific Press*, Aug. 4th, 1877.)—J. M. Redway,

809. **Silver Ore.** (?) — BIG BILK MINE, GLOBE DISTRICT, Arizona.—J. M. Redway.

810. **Iodyrite.** (?) — DIXIE MINE, GLOBE DISTRICT, Arizona.—J. M. Redway.

811. **Silver Ore.**—HUNKEY DORY MINE, GLOBE DISTRICT, Arizona.*

812. **Zeolite.** (?) —EASTERN NEVADA.—Chas. H, Denison.

813. **Silicious Mineral,** often mistaken for FREE SILVER.—EASTERN NEVADA.*

814. **Strontianite,** (?) in JASPER.—Near SAN FRANCISCO, Cal.—W. R. Shaw.

815. **Malachite.** (*Argentiferous*). — SHERMAN MINE, GLOBE DISTRICT, Arizona.—J. M. Redway.

816. **Molybdenite.**—TECOMA MINE, LUCIEN DISTRICT, Nevada.—Loaned by Ford H. Rogers.

817. **Copper Ore.** (*Chalcopyrite*).—UNION MINE, COPPEROPOLIS.†

818. **Thenardite**.—SLATE RANGE, San Bernardino Co., Cal. Occurs with Tincal, Boracic Acid and Salt.—J. W. Searles.

819. **Tincal**.—SLATE RANGE, San Bernardino Co., Cal. This locality produces a very large quantity of superior borax, which crystalizes from simple solution into borax equal to that produced artificially from Boracic Acid, which is not the case from any other known locality.—(See 139.)—J. W. Searles.

820. **Native Sulphur**. — HUMBOLDT Co, Nevada.—(See 172.)—American Sulphur Company.

821. **Silver Ore**.—GRAND PRIZE MINE, TUSCARORA, Elko Co., Nevada.—Grand Prize Mining Company.

822. **Solfataric Rock**, Containing a very small quantity of CINNABAR.—Near CALISTOGA, Napa Co., Cal.—S. Kellett.

823. **Volcanic Breccia**.—Near CALISTOGA, Napa Co., Cal.—S. Kellett.

824. **Basalt**, (with *Microscopic Section*.)—Near CALISTOGA, Napa Co., Cal.—Melville Attwood.

825. **Limestone**, (with *Microscopic Section*.) — COMSTOCK VEIN ; lowest workings, 400 feet west of the vein.—Melville Attwood.

826. **Essonite**. (?)—Near SITKA, Alaska.*

827. **Gold Ore**.—NEVADA MINE, NEVADA CITY, Nevada Co. Cal.*

828. **Copper Ore**.—LA VICTORIE MINE, Mariposa Co., Cal.*

829. **Cuprite**.—Near ST. HELENA, Sonoma Co., Cal.*

830 **Copper Ore**, CHALCOPYRITE and CUBAN.—GRIZZLEY MINE, 10 miles from ST. HELENA.*

831. **Copper Ore**.—SIERRA NEVADA, Margin of MONO LAKE, Mono Co., Cal.*

832. **Silicified Wood**.—Near GRASS VALLEY.—This specimen, when examined microscopically, is extremely interesting.*

833. **Silver Ore**.—DIANA MINE, BLIND SPRINGS, Mono Co., Cal.—J. H. Givens.

834. **Azurite and Malachite**, on Auriferous quartz.—WHITMAN'S PASS, Tuolumne Co., Cal.*

835. **Chalcedony**.—INFERNO, Humboldt Co., Nevada.*

836. **Gold Ore**.—ENTERPRISE, MINE, MEADOW LAKE, Nevada Co., Cal.—Rich in gold, but refractory.*

837. **Copper Ore**.—EAGLE COPPER MINE, QUAIL HILL, Calaveras Co., Cal.—John L. Murphy. (See No. 423.)

838. **Silver Ore**.—NORTH BELMONT MINE, Nye Co., Nevada.—D. L. Thomas, Sec'y.

839. **Quicksilver Ore**. — OCEANIC MINE, San Luis Obispo Co., Cal.—From the Company. (See No. 322.)

840. **Quicksilver Ore**.—SUNDERLAND Q. M. Co., San Luis Obispo Co., Cal.—D. L. Thomas, Sec'y. (See No. 329.)

841. **Quicksilver Ore**.—ALTOONA QUICKSILVER MINE, Trinity Co., Cal.—Loaned by the Company.

842. **Steam Cinnabar**.—ALTOONA QUICKSILVER MINE, Trinity Co., Cal.—From the Company.

843. **Brown Jasper**.—MURPHY'S, Calaveras Co., Cal.—A. Jaquith. (See No. 53.)

844. **Silver Ore.**—MINNETTA BELLE SILVER MINING Co., Inyo Co., Cal.—J. F. McGeoghergan.

845. **Silver Ore.**—JEFFERSON MINE, JEFFERSON, Nye Co., Nevada.—C. A. Sankey.

846. **Silver Ore.** — NEW YORK MINE, GOLD HILL, Nevada.—D. L. Thomas.

847. **Silver Ore.**—LADY WASHINGTON MINE, GOLD HILL, Nevada.—D. L. Thomas.

848. **Retinalite.** (?)—Napa Co., Cal.*

849. **Silver Ore.**—TIP TOP MINE, BLACK CAÑON DIST., YAVAPAI DIST., Arizona.—Tip Top M. Co.

850. **Gold Quartz.**—SEATON MINE, Amador Co., Cal.†

851. **Silver Lead Ore.**—Nye Co., Nevada.—Tybo G. and S. M. Co.

852. **Copper Ore.** (?)—WINTHROP MINE, Shasta Co., Cal.—F. S. Monroe.

853. **Gold Ore.**—Said to be very rich.—Nevada.†

854. **Gold Ore.**—WASHINGTON MINE, Mariposa Co., Cal.†

855. **Copper Ore.**—GREAT EASTERN MINE, PEAVINE DISTRICT, Washoe Co., Nevada.†

856. **Copper Ore.**—BUCHANAN MINE, Mariposa Co., Cal.†

857. **Copper Ore.**—PECK MINE, Shasta Co., Cal.†

858.—**Gold Ore.**—GREEN EMIGRANT MINE, MEADOW LAKE, Nevada Co., Cal.†

859. **Silver Lead Ore.**—UNION MINE, CERRO GORDO, Inyo Co., Cal.†

860. **Silver Ore**=PARTZITE. — DIANA MINE, BLIND SPRINGS, Mono Co., Cal.†

861. **Gold and Silver Ore**.—MASTODON MINE, PINE GROVE, Esmeralda Co., Nevada †

862. **Gold and Silver Ore**.—CROPPINGS GOLD HILL, Nevada, 1860.†

863. **Fluor Spar (?)** with MALACHITE.—Humboldt Co., Nevada.†

864. **Gold Ore**.—CALAVERAS MINE, Calaveras Co., Cal.†

865. **Silver Ore**.—SAN ANTONIO MINE, INDEPENDENCE, Mono Co., Cal.†

866. **Copper Ore**. (*Cuprite*). — BATTLE MOUNTAIN, Lander Co., Nevada.†

867. **Silver Ore**. (?)—"BLACK ROCK," Humboldt Co., Nevada.†

868. **Silver Ore**.—HAUN MINE, CERRO GORDO, Inyo Co., Cal.†

869. **Silver Copper Ore**.—PLANET MINE, Arizona.†

870. **Gold Ore**.—LE COMPTON MINE, Nevada.†

871. **Gold Ore**.—OLIVE BRANCH MINE, El Dorado Co., Cal.†

872. **Silver Ore**.—CROWN POINT MINE, COMSTOCK LEDGE, VIRGINIA, Nevada.†

873. **Gold Ore**. — MOHAWK AND MONTREAL MINE, MEADOW LAKE, Nevada Co., Cal.†

874. **Copper Ore**=CHALCOPYRITE—UNION MINE, COPPEROPOLIS, Calaveras Co., Cal.†

875. **Croppings** of a Silver mine, as prospectors find them.†

876. **Copper Silver Ore.**—San Bernardino Co., Cal.†
877. **Copper Ore.**—GREAT WESTERN MINE, PEAVINE DISTRICT, Washoe Co., Nevada.†
878. **Silver Ore.**—MEXICAN MINE, COMSTOCK LEDGE, VIRGINIA, Nevada,†
879. **Copper Ore.**—EMPIRE MINE, Calaveras Co., Cal.†
880. **Quartz**, with CHALCOPYRITE.—Nevada Co., Cal.†
881. **Gold Ore.**—DUNDERBERG MINE, Mono Co., Cal.†
882. **Gold and Silver Ore.**—HEIGHT MINE, CLEAR CREEK DISTRICT, Kern Co., Cal.†
883. **Lead Bullion.**—MODOC CONSOLIDATED M. CO.—First droppings from the furnace.—LOOK OUT DISTRICT, Inyo Co., Cal.†
884. **Argentiferous Galena.**—ARIZONA CONSOLIDATED MINE, Arizona.†
885. **Argentiferous Anglesite.**—SANTA MARIA MINE, CERRO GORDO, Inyo Co., Cal.†
886. **Gold Ore.**—UTAH MINE, ANGELS, Calaveras Co., Cal.†
887. **Gold Ore.**—HOME STAKE MINING CO., WHITEWOOD MINING DISTRICT, Lawrence Co., Dakota.
888. **Azurite.**—ST. IGNATIUS MINE, CERRO GORDO, Inyo Co., Cal.†
889. **Gold Quartz.**—KNOX GOLD MINE, Tuolumne Co., Cal.†
890. **Silver Lead Ore.**—BLACK PRINCE MINE, SLATE RANGE DISTRICT, San Bernardino Co., Cal.—Chas. E. Sherman.

891. **Gold Ore.**—ESTRACHA MINE, CLEAR CREEK DISTRICT, Kern Co., Cal.—Chas. E. Sherman.

892. **Dolomite and Magnesite. (?)**—MOUNT CATHERINE, Napa Co., Cal.—C. Churchill.

893. **Gold Ore.**—APOLLO MINE, CLEAR CREEK DISTRICT, Kern Co., Cal.—Chas. E. Sherman.

894. **Gold Ore.**—MACEDONIAN MINE, Kern Co., Cal.—Chas. E. Sherman.

895. **Gold Ore.**—SUMNER MINE, Kern Co., Cal.—Chas. E. Sherman.

896. **Marble**—Kern Co., Cal.—Chas. E. Sherman.

897. **Gold Ore.**—MORTON MINE, Kern Co., Cal.—Chas. E. Sherman.

898. **Gold Ore.**—WASHINGTON MINE, Kern Co., Cal.—Chas. E. Sherman.

899. **Gold and Copper Ore.**—SEMINOLE MINE, TULARE RIVER, Tulare Co., Cal.—Chas. E. Sherman.

900. **Gold Ore.**—COSMOPOLITAN MINE, CLEAR CREEK DISTRICT, Kern Co., Cal.—Chas. E. Sherman.

901. **Gold Ore.**—BULL RUN MINE, BULL RUN DISTRICT, Kern Co., Cal.—Chas. E. Sherman.

902. **Gold Ore.**—MONONGAHELA MINE, TULARE RIVER, Tulare Co., Cal.

903. **Gold Ore.**—ST. CHARLES MINE, CLEAR CREEK DISTRICT, Kern Co., Cal.—Chas. E. Sherman.

904. **Gold Ore.**—GOLDEN ROD MINE, CLEAR CREEK DISTRICT, Kern Co., Cal.—Chas. E. Sherman.

905. **Gold Ore.**—BRIGHT STAR MINE, PIUTE MOUNTAIN, Kern Co., Cal.—Chas. E. Sherman.

906. **Gold Ore.**—NEW WORLD MINE, CLEAR CREEK DISTRICT, Kern Co., Cal.—Chas. E. Sherman.

907. **Silver Copper Ore (?)**—HEARST MINE, SLATE RANGE, San Bernardino Co., Cal.—Chas. E. Sherman.

908. **Silver Ore (?)**—MARVEL MINE, ERSKIN CREEK DISTRICT, Kern Co., Cal.—Chas. E. Sherman.

909. **Silver Gold Ore.**—BUNNELL MINE, BULL RUN DISTRICT, Kern Co., Cal.—Chas. E. Sherman.

910. **Silver Gold Ore.**—RUPERT MINE, DALONEGA DISTRICT, Kern Co., Cal.—Chas. E. Sherman.

911. **Gold and Copper Ore.**—SHEEP HORN MINE, SLATE RANGE DISTRICT, San Bernardino Co., Cal.—Chas. E. Sherman.

912. **Gold Ore.**—SUNRISE MINE, CLEAR CREEK DISTRICT, Kern Co., Cal.—Chas. E. Sherman.

913. **Gold Ore.**—"74" MINE, ERSKIN CREEK DISTRICT, Kern Co., Cal.—Chas. E. Sherman.

914. **Silver Copper Ore.**—SLATE RANGE DISTRICT, San Bernardino Co., Cal.—Chas. E. Sherman.

915. **Silver Ore.**—DEFIANCE MINE, DARWIN DISTRICT, Inyo Co., Cal.—Chas. E. Sherman.

916. **Silver Lead Ore.**—LUCKY JIM MINE, NEW COSO, DARWIN DISTRICT, Inyo Co., Cal.—Chas. E. Sherman.

917. **Gold Ore.**—LONE VIEW MINE, SLATE RANGE DISTRICT, San Bernardino Co., Cal.—Chas. E. Sherman.

918. **Gold Ore.**—SAN FRANCISCO MINE, SLATE RANGE DISTRICT, San Bernardino Co., Cal.—Chas. E. Sherman.

919. **Silver Ore.**—ALTA MINE, SLATE RANGE DISTRICT, San Bernardino Co., Cal.—Chas. E. Sherman.

920. **Silver Lead Ore.**—DRY WASH MINE, SLATE RANGE DISTRICT, San Bernardino Co., Cal.—Chas. E. Sherman.

921. **Sulphur.**—Kern Co., Cal.—Chas. E. Sherman.

922. **Silver Ore.**—NORTHERN BELLE MINE, Esmeralda Co., Nevada.—Northern Belle M. & M. Co.

923. **Silver Ore.**—YELLOW JACK MINE, Inyo Co., Cal.†

924. **Gold and Silver Ore.**—KERNVILLE MINE, KERNVILLE, Kern Co., Cal.†

925. **Silver Ore.**—"SILVER SANDSTONE."—CALIFORNIA MINE, LEEDS DISTRICT, Utah.—Loaned by J. D. Brastow.—This and the next three which follow, are part of a sedimentary formation, in which the silver is found both in a free state and in the form of chloride. No geological examination of the locality has been made, but it seems to be an ancient lake or shallow sea, into which streams bearing much sedimentary matter have discharged. It is not easy to account for the silver. Specimens will be furnished to those who wish to study them. In this connection see No. 528. The deposit is being worked extensively, and is paying handsome dividends.

926. "**Silver Sandstone**"—STORMONT MINE, LEEDS, Utah. (See No. 925.)—J. B. Van Hagen.

927. "**Silver Sandstone.**"—BARBEE & WALKER MINE, LEEDS DISTRICT, Utah.—J. B. Van Hagen.

928. "**Silver Sandstone.**"—LEEDS MINE, LEEDS DISTRICT, Utah.—J. B. Van Hagen.

929. **Fossil Wood**, found in the Silver Sandstone deposit.—LEEDS DISTRICT, Utah. (See 925, 926, 927 and 928.)—Loaned by J. D. Brastow.

930. **Gold Quartz.** — LECOMPTON MINE, Nevada Co., Cal.†

931. **Mountain Cork.**—*Amphibol*.—Tuolumne Co., Cal.

932. **Silver Ore.**—EMIGRANT MINE, LEE DISTRICT, Inyo Co., Cal.—M. J. McManus.

933. **Silicified Wood.** —GRAVEL BED, DEER CREEK, Nevada Co., Cal.

934. **Cinnabar.**—BOSTON CINNABAR MINE, Trinity Co., Cal.

935. **Gold Ore.**—KELSEY G. & S. M. Co., El Dorado Co., Cal.

936. **Gold Bearing Sulphurets.**—Tuolumne Co., Cal.

937. **Silver Ore.**—SPRUCE MOUNTAIN DISTRICT, Elko Co., Nevada.—Nevada Land and Mining Co.

938. **Cement, with GOLD.**—BED OF STANISLAUS RIVER, Tuolumne Co., Cal.

939. **Silver Ore.**—PLEIADES MINE, WARD DISTRICT, White Pine Co., Nevada.—Contains a large percentage of Manganese, which is common in Silver ore in this and neighboring districts.

940. **Silver Ore.**—HUNTER MINE, White Pine Co., Nevada.—Smelting Ore.

941. **Silver Ore.**—PANTHER MINE, Elko Co., Nevada.

942. **Silver Ore.**—BELCHER MINE, GOLD HILL, Storey Co., Nevada.—Belcher Mining Co.

943. **Silver Ore.**—MANHATTAN MINE, REESE RIVER DISTRICT, AUSTIN, Lander Co., Nevada.—John A. Paxton.

944. **Gold Ore.**—TUOLUMNE Co., Cal.—Milton Gold Mining Company.

945. **Silver Lead Ore.** — RAYMOND & ELY MINE, Lincoln Co., Nevada.—Raymond & Ely Company.

946. **Anglesite and Cerusite.** (*Argentiferous.*) (?)—RAYMOND & ELY MINE, Lincoln Co., Nevada.—Raymond & Ely Mine.

947. **Galena.**—WHITE & SHILLOH MINE, Lincoln Co., Nevada.—(See No. 244.—John O. Earle.

948. **Hematite.** (?)—COQUILLA RIVER Oregon.

949. **Silver Ore.**—NIAGARA GOLD AND SILVER MINING COMPANY, GOLD HILL, Storey Co., Nevada.

950. **Lignite** = *Jet*.—Near HOLLISTER, San Benito Co., Cal.*

951. **Silver Ore.**—LILLY MINE, BLIND SPRINGS DISTRICT, Mono Co., Cal.—Silver = \$1,200 per ton?—Albert Mack.

952. **Silver Ore** = *Partzite*. — DIANA MINE, BLIND SPRINGS DISTRICT, Mono Co., Cal.—Silver = \$600 per ton ?

953. **Silver Ore.**—POWER MINE, YELLOW JACKET DISTRICT, Mono Co., Cal.—Silver=\$1,500 per ton?—Albert Mack.

954. **Silver Ore.**—YELLOW JACKET DISTRICT, Mono Co., Cal.—Silver=\$1,200 per ton (?)—Albert Mack.

955. **“White Rock Formation.”**—BENTON, Mono Co., Cal.—Albert Mack.

956. **Silver Ore.** — BLIND SPRINGS DISTRICT, Mono Co., Cal.—Silver=\$600 per ton (?)—Albert Mack.

957. **Obsidian.** — BENTON, Mono Co., Cal.—Albert Mack.

958.—**Red Lava.**—ADOBE MEADOWS, Mono Co., Cal.—Albert Mack.

959. **Travertine.**—MONO LAKE, Mono Co., Cal.—(See Nos. 326 and 337.)—Albert Mack.

960. **Silver Lead Ore.**—SHEBA SILVER MINING CO., STAR DISTRICT, Humboldt Co., Nevada.

961. **Gold Quartz.**—WYOMING CON. G. M. CO., NEVADA CITY, Nevada.

962. **Silver Ore.**—BELMONT, Nye Co., Nevada.*

963. **Chromic Iron.**—SAN LUIS OBISPO CO., Cal.

964. **Silver Ore.**—MODOC CONSOL. M. CO., LOOKOUT, Inyo Co., Cal.

965. **Silver Ore.**—MARTIN WHITE MINING CO., White Pine Co., Nevada.—M. Clement.

966. **Silver Ore.** — MIAMI MINE, GLOBE DISTRICT, Pinal Co., Arizona.—Richmond Basin Mining Co.

967. **Pyrolusite.**—MARIN Co., Cal.—J. Ayres

968. **Gold Ore.** (?) — GOLDEN STAR M. CO., CAVE CREEK DISTRICT, Maricopa Co., Arizona.

969. **Silver-Copper Ore.**—ALAMEDA MINE, TOYABE DISTRICT, White Pine Co., Nevada.—M. Clement.

970. **Gold Ore.**—HOME STAKE MINE, DEADWOOD, Dacota.—(See No. 587.)

971. **Silver Ore.**—ALTA MINE, GOLD HILL, Storey Co., Nevada.*

972. **Gold Ore.**—STONEWALL MINE, JULIEN DISTRICT, San Diego Co., Cal.

973. **Cinnabar.** — GREAT WESTERN M. CO., Lake Co. Cal.—200 feet from surface.

974. **Paleozoic Fossils.** (*Coral.*)—WHITE PINE, Nevada.—Associated with the silver ores.*

975. **Paleozoic Fossils.** (*Silicious.*)—WHITE PINE Nevada.*

976. **Paleozoic Fossils.** (*Trilobites.*)—WHITE PINE Nevada.*

977. **Paleozoic Fossil.** (*Lepidodendron.* ?)—WHITE PINE, Nevada.—Found associated with silver ores.*

978. **Paleozoic Fossils,** producta, (*Carboniferous.* ?)—Found with COAL; one of the ALEUTIAN ISLANDS.*

979. **Coal.** — HANK MITCHELL'S MINE, Near EUREKA MINE, (15 miles), Eureka Co., Nevada.—Hank Mitchell.

980. **Coke.**—From No. 979.—Hank Mitchell.

981. **Paleozoic Fossils.** (*Carboniferous.* ?)—Found with No. 979.—EUREKA Co. Nevada.—Hank Mitchell.

982. **Shaly Coal.**—Overlying No. 979.—Hank Mitchell.

983. **Magnetite.** — SHASTA Co., Cal.—California State Geological Society.

984. **Marble.**—CARMELO BAY, Monterey Co., Cal.—Cal. State Geological Society.

985. **Fossil.**—Found in formation overlying COAL.—Curry Co., Oregon.—Loaned by California State Geological Society.

986. **Silver Ore.**—MOUNTAIN CITY MINE, COPE DISTRICT, Elko Co., Nevada.—Cal. State Geological Society.

987. **Pyrolusite.**—Near ANGEL'S CAMP, Calaveras Co Cal.—Cal. State Geological Society.

988. **Wulfenite.** — TECOMA MINE, LUCIN DISTRICT, Utah.—Cal. State Geological Society.

989. **Silver Ore.**—PROVIDENTIAL MINE, AUSTIN, Lander Co., Nevada.—Cal. State Geological Society.

990. **Silver Lead Ore.**—TECOMA MINE, LUCIN DISTRICT, Utah.—Cal. State Geological Society.

991. **Infusorial Earth.** (?)—Near COMANCHE, Calaveras Co., Cal.—Cal. State Geological Society.

992. **Silicified Wood.**—WHITE PINE, Nevada.—Cal. State Geological Society.

993. **Graphite.** — Near CARSON, Nevada.—Cal. State Geological Society.

994. **Silver Ore.** (*Chloride.*)—SWILLING MINE, TIP TOP DISTRICT, Yavapai Co., Arizona.—Loaned by Cal. State Geological Society.

995. **Obsidian.**—Near LOWER LAKE, Lake Co., Cal.—Cal. State Geological Society.

996. **Coal.**—WELLINGTON MINE, DEPARTURE BAY, VANCOUVER ISLAND. Vein, 6 feet thick.—R. Wingate, M. E.

997. **Coal.**—WESTPORT COAL MINE, COOS BAY, Oregon.—R. Wingate, M. E.

998. **Coal.**—SONOMA Co., Cal.—J. F. Johnson.

999. **Gold Ore.** — SHASTA CON. MINING Co., Shasta Co., Cal.

1000. **Marble.**—Near HELENA, Montana.—F. F. Benjamin.

1001. **Gold Quartz.**—NEW ALBANY MINE, Tuolumne Co., Cal.—F. F. Benjamin.

1002. **Slate.**—EL DORADO Co., Cal.—Conlin & Roberts.

1003. **Silver Ore.**—PENO MINE, SINALOA, Mexico ; 140 miles from MAZATLAN.

1004. **Silver Ore.**—LEXINGTON M. Co, GOLD HILL, Storey Co., Nevada.

1005. **Lignite.**—Found 250 feet deep in PLIOCENE GOLD M. Co. CLAIM, Sierra Co., Cal.

1006. **Beach Sand**, containing GOLD.—HUMBOLDT BAY, Humboldt Co., Cal.—(See No. 775.)—Ed. A. T. Gallagher.

1007. **Beach Sands.**—COAST of OREGON, Coos Co.—Containing Gold ; average value said to be \$4 per ton. From an ancient sea beach, 1½ miles inland.—(See Nos. 775 and 1006.—John Landers.

1008. **Beach Sands.** Concentrated by the action of the waves—Coos Co., Oregon.—(See No. 1007.)—John Lander.

1009. **Beach Sand.** Artificially concentrated, and in which the GOLD is visible.—Coos BAY, Oregon.—John Landers.

1010. **Asbestus.**—CALIFORNIA. Exact locality unknown.

1011. **Kaolin. (?)**—HUMBOLDT Co., Nevada.

1012. **Silver Ore.**—DAY MINE, POCHE DISTRICT, Lincoln Co., Nevada.

1013. **Galena.**—KING MINE, HAMILTON, White Pine Co, Nevada.—King Mining Co.

1014. **Silver Lead Ore.**—KING MINE, HAMILTON, White Pine, Co., Nevada.—King Mining Co.

1015. **Quartz Crystals.** — SILVER MONARCH MINE
CENTRAL DISTRICT, Humboldt Co., Nevada.—O. H. Bogart.

1016. **Silver Ore.**—SILVER MONARCH MINE, CENTRAL
DISTRICT, Humboldt Co., Nevada.—O. H. Bogart.

1017. **Azurite.**—RED MOUNTAIN, 26 miles east of CRES-
CENT CITY, DEL NORTE, Cal.—Vernon Seaman.

1018. **Gold Quartz.**—OAKLAND MINE, GRASS VALLEY,
Nevada Co., Cal.—Oakland Gold M. Co.

1019. **Silver Ore.**—COLORADO MINE, Yuma Co., Arizona.

1020. **Graphite.**—WESTERN MEXICO.—D. E. Ferris.

1021. **Silver Ore.**—STAR MINE, CHERRY CREEK, White
Pine Co., Nevada.—Star Mining Co.

1022. **Silver Ore.**—COLORADO MINE, PLOMOSA Dis-
TRICT, Yuma Co., Arizona.—Mon Tour G. & S. M. Co.

1023. **Silver Ore.** — PROVIDENCE MINE, Yuma Co.,
Arizona.—Mon Tour G. & S. M. Co.

1024. **Silver Ore.**—TROUBADOR MINE, WANDA MOUN-
TAINS, Arizona.—Mon Tour G. & S. M. Co.

1025. **Silver Copper Ore.**—MON TOUR G. & S. MINE,
PLOMOSA DISTRICT, Yuma Co., Arizona.

1026. **Silver Ore.** — BELLA UNION MINE, PANAMINT,
Inyo Co., Cal.—Mon Tour G. & S. M. Co.

1027. **Silver Ore.** — PRESIDENT MINE, PLOMOSA Dis-
TRICT, Yuma Co., Arizona.—Mon Tour G. & S. M. Co.

1028. **Silver Ore.**—COLORADO MINE, PLOMOSA Dis-
TRICT, Yuma Co., Arizona.—Mon Tour G. & S. M. Co.

1029. **Stibnite.** (?) WASHED BOWLDER.—CENTENNIAL
MINE, San Bernardino Co., Cal.

1030. **Silver Ore.**—BELMONT MINING CO., BELMONT, Nye Co., Nevada.

1031. **Silver Ore.**—SILVER KING MINE, PIONEER DISTRICT, Maricopa Co., Arizona.—D. C. Ferris.

1032. **Litharge**, probably a furnace product.—CASTLE DOME, Arizona.—(See No. 563.)—D. C. Ferris.

1033. **Silver Ore.** (*Concentrated*).—SHEBA MINE, Humboldt Co., Nevada.

1034. **Copper Ore**=*Chalcosite*.—LIBERTAD MINE, PLOMOSA DISTRICT, Yuma Co., Arizona.—Mon Tour G. & S. M. Company.

1035. **Argentiferous Galena.**—GREGORY MINE, Jefferson Co., Montana.—F. F. Benjamin.

1036. **Magnetite.**—BALL CREEK, Butte Co., Cal.—D. C. Ferris.

1037. **Silver-Copper Ore.**—LEXINGTON MINE, Near HELENA, Montana.—F. F. Benjamin.

1038. **Gold Quartz.**—CHARIOT M. & M. Co., San Diego Co., Cal.

1039. **Gold Quartz.**—Free gold.—GRASSHOPPER G. M. Co., MOSQUITO GULCH, Calaveras Co. Cal.—Vernon Seaman.

1040. **Cement**, with GOLD.—BLUE LEAD, WESKE CLAIM, Placer Co., Cal.. Adolph Weske.

1041. **Gold Ore.** (FREE GOLD).—OLIVE LODE, Placer Co. Thought to be the source of the gold in Great Blue Gravel Lead.—Allen Oliver.

1042. **Sulphur.**—From the heaps in which the copper ore (No. 792) is Roasted.—SAN FRANCISCO COPPER M. Co., SPENCEVILLE, Nevada Co., Cal.

1043. **Sulphate of Copper.**—Made by the SAN FRANCISCO COPPER M. Co., SPENCEVILLE, Nevada Co., Cal

1044. **Actinolite.**—MARIN Co., Cal

1045. **Silver Ore.**—SHARK MINE, WARD DISTRICT, WHITE PINE DISTRICT, White Pine Co., Nevada.—Ward Consol. M. Co.

1046. **Silver Ore.**—ALPINE Co., Cal —Mr. Palmer.

1047. **Copper Ore.**—DIAMOND MINE, LOW DIVIDE, Del Norte Co., Cal.—Vernon Seaman.

1048. **Quicksilver Ore.**—BELLA UNION MINE, Napa Co., Cal.

1049. **Silver Ore.**—SILVER PRIZE MINE, Elko Co., Nevada.

1050. **Alkaline Incrustation.** — ADOBE MEADOWS, Mono, Co., Cal.

1051. **Cerussite.**—MULEJE, Lower California.—Edward N. Hooper.

1052. **Azurite and Malachite.**—MULEJE, Lower California.—Edward N. Hooper.

1053. **Copper Ore.**—MULEJE, Lower California.—Edward N. Hooper.

1054. **Metacinnabarite and Cinnabar.** — GREAT WESTERN Q. M. Co. Lake Co., Cal.—(See No. 973.)

1055. **Silver Lead Ore.**—MAUCH CHUNK MINE, IDLEWILD M. & T. Co., PIONEER DISTRICT, Pinal Co., Arizona.

1056. **Silver Ore. (?)**—HURRICANE M. Co., Humboldt Co., Nevada.

1057. **Gold Ore. (?)**—SANTA CRUZ Co., Cal.

1058. **Copper Ore.**—ALTA COPPER MINE, Del Norte Co., Cal.—Vernon Seaman.

1059. **Silver Copper Ore.** — CADMUS MINE, GLOBE CITY, Pinal Co., Arizona.

1060. **Diatomaceous Earth.**—VENTURA Co., Cal.—Ventura Rock Soap Co.

1061. **Saponite**, "Rock Soap" in its natural state.—VENTURA Co., Cal.—Ventura Rock Soap Co.

1062. "**Rock Soap**," manufactured.—Ventura Rock Soap Co.

1063. **Crude Borax.**—TEEL'S MARSH, Esmeralda Co., Nevada.—W. T. Coleman & Co.

1064. **Borate of Lime**=*Ulexite*.—COLUMBUS DISTRICT, Esmeralda Co., Nevada.—Wm. T. Coleman & Co.

1065. **Concentrated Borax.**—(First crystallization by Smith Bros.)—ESMERALDA Co Nevada.—Wm. T. Coleman & Co.

1066. **Borax of Commerce.**—Double refined by STEVENOT & Co., SAN FRANCISCO.—Wm. T. Coleman & Co.

1067. **Silver Copper Ore.** — ALEXANDRIA MINE, GRANTSVILLE, Nye Co., Nevada.—J. B. Cooper, President Alexander M. Co.

1068. **Hematite.**—RAWLING'S SPRINGS, Wyoming Ter.—C. Mason Kinne.

1069. **Agate.**—Near OGDEN, Utah.—Loaned by S. Heydenfeldt, Jr.

1070. **Stibnite.**—KERN Co., Cal.—Loaned by S. Heydenfeldt, Jr.

1071. **Stream Tin**=*Cassiterite*.—DURANGO, Mexico.—Loaned by S. Heydenfeldt, Jr.

1072. **Quartz Crystals.** — CALAVERAS Co., Cal.—
Loaned by S. Heydenfeldt, Jr. .

1073. **Tertiary Coal.**—BLACK DIAMOND COAL MINE,
Contra Costa Co., Cal.—Black Diamond Coal Mining Co.

1074. **Tertiary Coal.**—EMPIRE MINE, MT. DIABLO
DISTRICT, Contra Costa Co., Cal.—Empire Coal M. Co.

1075. **Tertiary Coal.**—PITTSBURG MINE, CLARK VEIN,
MT. DIABLO DISTRICT, Contra Costa Co., Cal.

1076. **Tertiary Coal.**—HOXHURST MINE, MT. DIABLO
DISTRICT, Contra Costa Co., Cal.

1077. **Coal.**—ONUGA, Alaska.—Alaska Coal Co.

1078. **Coal.**—TALBOT MINE, Washington Ter.

1079. **Coal.**—SOUTHPORT, COOS BAY, Coos Co., Oregon.
—Black Diamond Coal M. Co.

1080. **Coal.**—BLACK DIAMOND, MT. HOPE VEIN, MT.
DIABLO, Contra Costa Co., Cal.

1081. **Coal.**—EASTPORT MINE, Coos Bay, Oregon.

1082. **Coal.**—NEWPORT, Coos Bay, Oregon.

1083. **Coal.**—BELLINGHAM BAY, Washington Ter.—Bel-
lingham Bay Coal Co.

1084. **Coal.**—SEATTLE, W. T.—Seattle Transportation
and Coal Co.

1085. **Coal.**—NEW WELLINGTON COAL Co., DEPARTURE
BAY, Vancouver Island, B. C.

1086. **Coal.** — DOUGLASS MINE, DEPARTURE BAY, Van-
couver Island, B. C.

1087. **Coal.**—WELLINGTON COAL Co., DEPARTURE BAY,
Vancouver Island, B. C.

1088. **Coal.** — HARWOOD COAL CO., DEPARTURE BAY, Vancouver Island, B. C.

1089. **Coal.** — NANAIMO, B. C.

1090. **Silver Ore.** — BALTIMORE CON. M. CO., GOLD HILL, Storey Co., Nevada.

1091. **Argentite Crystals.** POORMAN MINE, Owyhee Co., Idaho.*

1092. **Gold Ore.** — ST. LAWRENCE MINE, Near AUBURN, Placer Co., Cal. — (See No. 701.) — G. W. Osborn.

1093. **Garnet,** in MICA SCHIST. — Near SITKA, Alaska. — (See No. 826.) — G. W. Osborn.

1094. **Silver Ore.** — CERRO GORDO MINE, Inyo Co., Cal.†

1095. **Silver-Gold Ore.** — KEARSAGE MINE, KEARSAGE DISTRICT, Inyo Co., Cal. — Said to assay \$5000 per ton. — (See No. 464.)†

1096. **Silver Ore.** — BLUE BIRD MINE, WHITE MOUNTAIN, Inyo Co., Cal.†

1097. **Gold Ore.** — LECOMPTON MINE, NEVADA CITY, Nevada Co., Cal.†

1098. **Silver Ore.** — ECLIPSE MINE, WHITE PINE, Nev.†

1099. **Gold Ore.** — NEW ENGLAND MINE, Nevada Co., Cal.†

1100. **Silver Ore.** — BELMONT MINE, CERRO GORDO, Inyo Co., Cal.

1101. **Quartz Crystals.** — Near HORNITOS, Mariposa Co., Cal. — Loaned by J. Olcese.

1102. **Gold Quartz.** — WASHINGTON M. CO., Near HORNITOS, Mariposa Co., Cal. — (See No. 854.) — G. E. Webber, Jr.

1103. **Silver Ore.**—GOULD & CURRY MINE, VIRGINIA, Nevada.†

1104. **Silver Ore**—GREAT EASTERN MINE, SHOSHONE M. Co., AUSTIN, Lander Co., Nevada.

1105. **Magnetite.**—IRON MOUNTAIN, Shasta Co., Cal.—5 miles from SACRAMENTO RIVER. Altitude above River, 1,300 feet. An abundance of wood, at \$2.50 per cord, and plenty of water at the mine. Analysis by Kellogg, Hewston & Co. : Protoxide of Iron, 11.58; Sesquioxide of Iron, 80.15; Alumina, 1.69; Silica, 4.95; Water, 1.63.—Chas. Camden.

1106. **Silver Ore.**—WASP MINE, WHITE MOUNTAINS, Inyo Co., Cal.†

1107. **Silver Ore.** — KEARSAGE DISTRICT, Inyo Co., Cal.†

1108. **Gold Quartz.**—MERRIMAC MINE, Nevada Co., Cal.†

1109. **Silicified Wood.**—NEVADA Co., Cal.†

1110. **Incrustation**, (formed in pipe).—WARM SULPHUR SPRINGS, Near ELKO, Elko Co., Nevada.—Chas. E. Convis.

1111. **Gold Quartz.**—INDEPENDENT MINE, El Dorado Co., Cal.†

1112. **Gold Ore.**—KENTUCK MINE, MEADOW LAKE, Lake Co., Cal.†

1113. **Galena.**—ARIZONA.†

1114. **Silver Lead Ore.**—CINDERELLA MINE, WHITE MOUNTAINS, Inyo Co., Cal.†

1115. **Copper Ore.**—WHITE CLOUD MINE, Churchill Co., Nevada.†

1116 **Silver Ore.**—EXCELSIOR MINE, WHITE PINE, Nevada.†

1117. **Gold Quartz.**—NEVADA CO., Cal.†

1118. **Copper Ore.**—GREEN MONSTER MINE, Inyo Co., Cal.—(See No 759.)†

1119. **Gold Ore.**—GRANT MINE, MEADOW LAKE, Nev. Co., Cal.†

1120. **Gold Ore.**—VULTURE MINE, WICKENBERG, Yavapai Co., Arizona.—D. L. Thomas

1121. **Silver Ore.**—STEPTOE CON. M. CO., WARD DISTRICT, White Pine Co., Nevada.—Myron Angel, Sec.

1122 **Gold Ore.**—LEPLEY MINE, 9 miles west of SILVER CITY, Owyhee Co., Idaho. Said to assay \$1,000 per ton. "Examine carefully."—J. T. McGeoghegan, Sec.

1123. **Gold Ore.**—GOLDEN TERRA M. CO., WHITEWOOD M. DISTRICT, Lawrence Co., Dacota.—From the Company. —(See No. 586.)

1124. **Gold Ore.**—GOLDEN CHARIOT MINE, SILVER CITY, Idaho.—(See No. 583.)—J. F. McGeoghegan, Sec.

1125. **Silver Ore.**—NEW COSO MINE, DARWIN, Inyo Co., Cal.—(See No. 432.)—From the Company.

1126. **Copper Ore.**—INYO CO., Cal.†

1127. **Silver Ore.**—QUENTIRO SILVER M. CO., Nye Co., Nevada.—D. S. Thomas, Sec.

1128. **Silver Ore.**—DIANA G. & S. M. CO., TUSCARORA, Elko Co., Nev. Assay value, gold, \$14.47; silver, \$118.82.—J. F. McGeoghegan, Sec.

1129. **Quartz Crystals.**—GOLDEN CHARIOT MINE, SILVER CITY, Idaho. 1,300 feet below surface.—J. F. McGeoghegan.

1130. **Silver Ore.**—HIDDEN TREASURE MINE, White Pine Co., Nevada.—(See No. 271.)

1131. **Gold Ore.**—RED CLOUD G. & S. M. Co., BODIE DISTRICT, Mono Co., Cal.—Governor Blaisdell.

1132. **Gold Ore.**—NEW ENGLAND G. M. Co., Nevada Co., Cal. —D. L. Thomas, Sec.

1133. **Silver Ore.**—SAN LUCAS MINE, CERRO GORDO, Inyo Co., Cal.†—(See No. 626.)

1134. **Silver Ore.**—EVENING STAR MINE, Humboldt Co., Nevada.†

1135. **Gold Ore.**—CALAVERAS MINE, Calaveras Co., Cal.†

1136. **Copper Ore.**—BEVELHYMER MINE, PEAVINE M. DISTRICT, Washoe Co., Nevada.—A. D. Griffin, Reno.

1137. **Silver Ore.**—INDEPENDENCE T. & M. Co., POTOSI No. 2, KEARSAGE DISTRICT, Inyo Co., Cal.

1138. **Silver Ore.**—INDEPENDENCE T. & M. Co., POTOSI No. 4, KEARSAGE DISTRICT, Inyo Co., Cal.

1139. **Silver Ore.**—HORNET MINE, TUSCARORA, Elko Co., Nevada.—Chas. E. Convis.

1140. **Quartz Crystals.**—SILVER MONARCH MINE, Humboldt Co., Nevada.—Thos. E. Atkinson, Sec.

1141. **Silver Ore.**—SILVER MONARCH MINE, Humboldt Co., Nevada.—Thos. E. Atkinson, Sec.

1142. **Stibnite.**—MONTEREY Co., Cal.—C. C. Riley.

1143. **Silver Lead Ore.**—ARKANSAS MINE, Yuma Co., Arizona.—Thos. E. Atkinson.

1144. **Silver Ore.**—SILVER QUEEN MINE, PIONEER DISTRICT, Arizona.—Thos. E. Atkinson.

1145. **Silver Ore.** --INDEPENDENCE T. & M. Co., POTOSI No. 4, KEARSAGE DISTRICT, Inyo Co., Cal.

1146. **Silver Ore.** --GEN. LEE S. M. Co., Maricopa Co., Arizona. --Thos. E. Atkinson.

1147. **Silver Ore.** --MAGGIE MINE, Idaho.--Chas. E. Convis.

1148. **Silver Ore.** --FLOWERY MINE, Storey Co., Nevada.--Chas. E. Convis.

1149. **Country Rock.** --TUSCARORA MINES, Tuscarora, Elko Co., Nevada.

1150. **Pyrites.** --ALTA MINE, TUSCARORA, Elko Co., Nevada.--Chas. E. Convis.

1151. **Graphite. (?)** --SONOMA Co., Cal.—C. C. Riley.

1152. **Galena.** --EUREKA BONANZA MINE, Yuma Co., Arizona.—T. E. Atkinson.

1153. **Silver Ore,** (showing free silver.)—MAZEPPA MINE, ALPS M. Co., PIOCHE, Lincoln Co., Nevada.—W. E. Hall.

1154. **Silver - Copper Ore.**—TULARE Co., Cal.†

1155. **Silver Ore.**—GOLCONDA MINE, Inyo Co., Cal.†

1156. **Silicified Wood.** NEVADA Co., Cal.†

1157. **Silver Ore.**—BELMONT MINE, Inyo Co., Cal.†

1158. **Silver Ore.**—VIRGINIA MINE, CERRO GORDO, Inyo Co., Cal.†

1159. **Silver Ore.**—COMANCHE MINE, Inyo Co., Cal.†

1160. **Silver Ore.**—BUENA SUERTE MINE, CERRO GORDO, Inyo Co., Cal.—(See No. 672.)†

1161. **Silver Ore.**—HUMBOLDT Co., Nevada.†

1162. **Gold Ore.** — SAN FRANCISQUITA CAÑON, LOS ANGELES Co., Cal. The first gold known to be found in California, was at this locality.†

1163. **Bed Rock Gravel**, with GOLD.—CLAIMS OF NORTH BLOOMFIELD GRAVEL MINING Co. Nevada Co., Cal.—Loaned by the Company.

1164. **Argentiferous Galena.** — TENNANT DISTRICT, Nevada.†

1165. **Silver Lead Ore.**—SHEBA MINE, Humboldt Co., Nevada.

1166. **Copper Ore**, (CAP ORE.)—COPPEROPOLIS, Calaveras Co., Cal.†

1167. **Silver Ore.**—MEXICAN MINE, COMSTOCK LODGE, VIRGINIA, Nevada.†

1168. **Silver Ore.**—SAN JUAN MINE, Inyo Co., Cal.†

1169. **Silver Ore.**—SILVER WAVE MINE, WHITE PINE, Nevada.

1170. **Silver Ore.**—YELLOW JACKET MINE, COMSTOCK LODGE, VIRGINIA, Nevada.†

1171. **Gold Ore.**—WYOMING MINE, Nevada Co., Cal.†

1172. **Silver Ore.**—RAYMOND & ELY MINE, PIOCHE DISTRICT, Lincoln Co., Nevada.†

1173. **Gold and Silver Ore.**—WIDE WEST MINE, AURORA Esmeralda Co., Nevada. Examine closely.†

1174. **Silver Ore.** — SUTRO MINE, COMSTOCK LODGE, VIRGINIA, Nevada.†

1175. **Silver Ore.**—HIGHBRIDGE MINE, PHILADELPHIA DISTRICT, Nye Co., Nevada.†

1176. **Gold Ore.** —MEADOW LAKE, Nevada Co., Cal.†
1177. **Silver Ore.** —HAUN MINE.
1178. **Silver Ore.** —CHICAGO MINE, Shasta Co., Cal. —
(See No. 665.)
1179. **Sandstone.** —HAYWARD'S, Alameda Co., Cal. —
Frank Williams.
1180. **Asphaltum.** —GOLETA RANCH, Santa Barbara
Co., Cal. —Occurs in large quantities, and is extensively used
for roofing, paving, &c.
1181. **Silver Ore.** —DE FREES MILL & M. Co., TUSCA-
RORA, Elko Co., Nevada. —Thos. E. Atkinson.
1182. **Fire Clay.** (?) —DE FREES M. & M. Co., TUSCA-
RORA, Elko Co., Nevada.
1183. **Chromic Iron.** —Near CLOVERDALE, Sonoma Co.,
Cal. This mineral exists in abundance in various localities
in California, and is being extensively shipped to Eastern and
European ports. —Kruse & Euler.
1184. **Shell Rock.** —MT. DIABLO, Contra Costa Co.,
Cal. —J. F. Atwill.
1185. **Cinnabar.** —NEW ALMADEN QUICKSILVER MINE,
NEW ALMADEN, Santa Clara Co., Cal. —From the Company.
1186. **Silver Ore,** with CINNABAR. —SOUTH BARCELONA
MINE, Nye Co., Nevada. —R. Homfray.
1187. **Gold Quartz,** (with free gold.) —GASTON RIDGE
MINING Co., Nevada Co., Cal. —A. W. Stirbird.
1188. **Silver-Copper Ore.** —RAINBOW MINE, RESTING
SPRINGS, San Bernardino Co., Cal. —J. B. Osborne.
1189. **Sulphur and Cinnabar.** —STEAMBOAT SPRINGS,
Washoe Co., Nevada. —Nevada Q. M. Co. —(See No. 190.)

To realize how interesting this specimen really is, it should be examined under the microscope.

1190. **Silicified Wood.**—CENTENNIAL MINE, NORTH BLOOMFIELD, Nevada Co., Cal.—(See No. 832.)—Emory L. Willard.

1191. **Gold Ore.** — RIVERSIDE MINE, Tuolumne Co., Cal.

1192. **Gold Ore.** (?)—STAR MINE, Tuolumne Co., Cal.

1193. **Copper Ore.** — RED MOUNTAIN COPPER CO., Del Norte Co., Cal.—Mr. Hazeltine.

1194. **Artificial Stone,** (3 specimens.)—Ernest L. Ransome.

1195. **Silver Ore.**—HAMILTON, WHITE PINE—Jennie A. & Black Rock Mining Co.

1196. **Wire Silver.**—GRAND PRIZE MINE, TUSCARORA, Elko Co., Nevada.—Loaned by S. D. Brastow.

1197. **Microscope Section,** MOSS AGATE.—MONTANA.

1198. **Microscope Section,** VOLCANIC ROCK.—SANDWICH ISLANDS.

1199. **Microscope Section,** SEDIMENTARY ROCK.—SANDWICH ISLANDS.

1200. **Microscope Section,** PORPHYRY.—INYO Co., Cal.

1201. **Microscope Section,** CHLORITE IN QUARTZ.—PLACER Co., Cal.

1202. **Microscope Section,** GRANITE.—YO SEMITE, Mariposa Co., Cal.

1203. **Microscope Section,** TRACHYTE. (?)—VIRGINIA, Nevada.

1204. **Microscope Section**, SERPENTINE. (?)—GILROY, Santa Clara Co., Cal.

1205. **Microscope Section**, MOCHA STONE.—ALASKA.

1206. **Microscope Section**, RUTILE IN QUARTZ.—Cal.

1207. **Microscope Section**, TRACHYTE —MARYSVILLE BUTTES, Yuba Co., Cal.

1208. **Microscope Section**, DOLERITE.—EAST WALL, COMANCHE MINE, Mono Co., Cal.

1209. **Microscope Section**.—WALL ROCK, HAYWARD'S MINE, Amador Co., Cal.

1210. **Microscope Section**.---HANGING WALL, SIERRA BUTTES MINE, Sierra Co., Cal.

1211. **Microscope Section**. - - WALL ROCK, WALL STREET MINE, Lake Co., Cal.

1212. **Microscope Section**.—FOOT WALL, CROWN POINT MINE, GOLD HILL, Nevada.—1400 feet.

1213. **Microscope Section**.—HANGING WALL, CROWN POINT MINE, GOLD HILL, Nevada.--1400 feet.

1214. **Microscope Section**.—HORSE IN CROWN POINT MINE, GOLD HILL, Nevada.—1400.

1215. **Microscope Section**.—BLACK DYKE, YELLOW JACKET MINE, COMSTOCK LOPE, Nevada.—1740 feet.

1216. **Microscope Section**.—BLACK DYKE, CROWN POINT MINE, GOLD HILL, Nevada.--1100 feet.

1217. **Microscope Section**.—BLACK DYKE, YELLOW JACKET MINE, COMSTOCK LOPE, Nevada.—1740 feet.

1218. **Microscope Section**.----OPHER MINE, WEST WALL, COMSTOCK LOPE, Nevada.

1219. **Microscope Slide, GOLD.**—MOSS MINE, Arizona.
1220. **Microscope Slide, GOLD, in JACOTINGA.** — BRAZIL.
1221. **Microscope Section.** — FOOT WALL, IDAHO MINE, GRASS VALLEY, Nevada Co., Cal.
1222. **Microscope Section.**—HANGING WALL, IDAHO MINE, GRASS VALLEY, Nevada Co., Cal.
1223. **Microscope Section.**—WALL ROCK, EUREKA MINE, GRASS VALLEY, Nevada Co., Cal.
1224. **Microscope Section, TRACHYTE.** — SUTRO TUNNEL, COMSTOCK LODGE, Nevada.
1225. **Microscope Section, ANDESITE.** (?)—SHAFT No. 4, SUTRO TUNNEL, COMSTOCK LODGE, Nevada.
1226. **Microscope Section, VOLCANIC ROCK.**—SANDWICH ISLANDS,
1227. **Microscope Slide, GOLD.** — AUBURN, Placer Co., Cal.
1228. **Sample of Crude Borate of Lime.**—AMERICAN BORACIC ACID CO., D. W. COE, President; R. N. VAN BRUNT, Secretary.
1229. **Crude Boracic Acid,** Manufactured from No. 1228, by a process patented March 16, 1875. The process consists of decomposing the Native Borate of Lime by Sulphurous Acid.—AMERICAN BORACIC ACID CO.
1230. **Boracic Acid, RECRYSTALIZED** — AMERICAN BORACIC ACID CO.
1231. **Boracic Acid, RECRYSTALIZED,** to represent the Commercial product on a large scale by the American Boracic Acid Co.

1232. Gypsum.—LOWER CALIFORNIA.—LUCAS & CO. Manufacturers of Plaster of Paris, San Francisco.

1233. Sample of Calcined Gypsum, prepared from No. 1232.—Lucas & Co.

1234. Slab of Gypsum, Artificial.—Lucas & Co.

1235. Granite. — PENRYN, Cal, PENRYN GRANITE WORKS. This Granite is extensively mined and used for building purposes and for street pavement.

1236. Slab of Antimony.—From the Works of Starr & Mathison, San Francisco, who are producing large quantities of Antimony from Colifornia and Nevada Ores.

1237. Crude Antimony.—From the Works of Starr & Mathison, San Francisco.

1238. Samples of Ore, worked for the Antimony they contain.—Starr & Mathison, San Francisco.

1239. Silver Ore.—GOULD & CURRY MINE, VIRGINIA, Nevada. —Gould & Curry Company. Estimated value, \$10,000 per ton.

1240. Silver Ore.—BELMONT MINE, CERRO GORDO, INYO Co., Cal.—J. J. Stewart, Lone Pine.

1241. Silver Ore.—ST. IGNACIO MINE, CERRO GORDO, INYO Co., Cal.—J. J. Stewart.

1242. Sample of Fire Clay.—NEAR ST. IGNACIO MINE, CERRO GORDO, INYO Co., Cal. It is very refractory, and admirably adapted for use in the smelting furnaces. W. A. Greenly.

1243. Silver Ore. REOLITO MINE, SINALOA, Mexico. G. L. Montgomery.

1244. Silver Ore.—ILLINOIS MINE, LODI DISTRICT, NYE Co., Nev.—D. B. Huntly.

No. of tons produced,—1st class 700; 2d class 1000. 1st class assay value, \$100 to \$400 per ton,—average \$200. Second class assay value, \$40 to \$100 per ton,—average \$70.

1245. Sulphur.—From the Mine of the CALIFORNIA AND NEVADA SULPHUR CO., RABBIT HOLE RANGE OF MOUNTAINS, HUMBOLDT Co., Nevada.—John Skinner.

1246. Silver Ore.—SILVA MINE, COSO DISTRICT, INYO Co., Cal.—A. B. Elder.

1247. Salt.—Manufactured by solar evaporation from sea water from the Bay of San Francisco.—B. F. Barton & Co

1248. Copper Ore.—TELEGRAPH MINE, HAY HILL, CALAVERAS Co., Cal.—Wm. H. Howland, Superintendent.

1249. Wall Rock.—OPHIR MINE, COMSTOCK LODGE, VIRGINIA, Nevada. 1900-foot level.—Melville Attwood.

1250. Rock Specimen—SUMMIT OF MOUNT WHITNEY, INYO Co., Cal.—Altitude, 15,600 feet.

1251. Cinnabar.—NEW ALMADEN MINE, SANTA CLARA Co., Cal.—Large specimen, New Almaden Quicksilver Mining Co.

1252. Cinnabar.—NEW ALMADEN MINE, SANTA CLARA Co., Cal.—1400-foot level; 6 feet from Hanging Wall.—Quicksilver Mining Co.

1253. Cinnabar.—NEW ALMADEN MINE, SANTA CLARA Co., Cal ; 200-foot level.—Quicksilver Mining Co.

1254. Cinnabar.—NEW ALMADEN MINE, SANTA CLARA Co., Cal. ; 1300-foot level.—Quicksilver Mining Co.

1255. Cinnabar.—NEW ALMADEN MINE, SANTA CLARA Co., Cal ; 1100-foot level.—Quicksilver Mining Co.

1256. **Cinnabar.** — NEW ALMADEN MINE; 1200-foot level.—Quicksilver Mining Co.

1257. **Cinnabar Breccia.** — NEW ALMADEN MINE, Santa Clara Co., Cal.; 1100-foot level.—Quicksilver Mining Co.

1258. **Cinnabar**, in SANDSTONE. (?)—NEW ALMADEN MINE, Santa Clara Co., Cal.; 1400-foot level.—Quicksilver Mining Co.

1259. **Cinnabar**, in SERPENTINE. (?)—NEW ALMADEN MINE, Santa Clara Co., Cal.; 1200-foot level —Quicksilver Mining Co.

1260. **Cinnabar**, BITUMEN AND CALCITE.—NEW ALMADEN MINE, Santa Clara Co., Cal.; 1300-foot level.—Quicksilver Mining Co.

1261. **Cinnabar.** — HANGING WALL, NEW ALMADEN MINE, Santa Clara Co., Cal.; 1400-foot level.—Quicksilver Mining Co.

1262. **Vein Matter.** — NEW ALMADEN MINE, Santa Clara Co., Cal.; 800-foot level.—Quicksilver Mining Co.

1263.—**Serpentine and Cinnabar.**—NEW ALMADEN MINE; 1400-foot level; 30 feet from the Hanging Wall.—Quicksilver Mining Co.

1264. **Bitumen.**—NEW ALMADEN MINE, Santa Clara Co., Cal.; 1300-foot level.—Quicksilver Mining Co.

1265. **Cinnabar**, in MAGNESIAN ROCK (?)—NEW ALMADEN MINE, Santa Clara Co., Cal.; 600-foot level.—Quicksilver Mining Co.

1266. **Hanging Wall.**—NEW ALMADEN MINE, Santa Clara Co., Cal.—Quicksilver Mining Co.

1267. **Foot Wall.**—NEW ALMADEN MINE, Santa Clara Co., Cal.—Quicksilver Mining Co.

1268. **Croppings.**—NEW ALMADEN MINE, Santa Clara Co., Cal.—Quicksilver Mining Co.

1269. **Cinnabar, Sandstone and Slate (?)**—NEW ALMADEN MINE, Santa Clara Co., Cal.—Quicksilver Mining Co.

1270. **Vein Matter.**—NEW ALMADEN MINE, Santa Clara Co., Cal.; 800-foot level.—Quicksilver Mining Co.

1271. **Cinnabar.**—OAT HILL, Napa Co., Cal.—Napa Consolidated Quicksilver Mining Co.

1272. **Cinnabar and Metacinnabarite Crystals.**—OAT HILL, Napa Co., Cal.—Napa Consolidated Quicksilver Mining Co.

1273. **Cassiterite.**—CAJALCA MINE, San Bernardino Co., Cal.—Loaned by San Jacinto Tin Mining Co. See No. 9.

1274. **Silver Lead Ore.**—UNION CONSOLIDATED MINING CO., CERRO GORDO, Inyo Co., Cal.

1275. **Gold Quartz.**—EMPIRE MINE, GRASS VALLEY, Nevada Co. Average specimen.—Empire Co.

1276. **Gold Quartz.** showing free gold.—EMPIRE MINE, GRASS VALLEY, Nevada Co., Cal.—Loaned by the Company. 4 specimens.

1277. **Gold with Quartz Crystals.**—EMPIRE MINE, GRASS VALLEY, Nevada Co., Cal.—Loaned by the Company.

1278. **Gold,** in CHALCEDONY.—EMPIRE MINE, GRASS VALLEY, Nevada Co., Cal.—Loaned by the Company.

1279. **Wall Rock.**—EMPIRE MINE, GRASS VALLEY, Nevada Co., Cal. Both walls are the same.—Empire Company.

1280. **Sulphurets.**—Concentrated from the Ore of EMPIRE MINE, GRASS VALLEY, Nevada Co., Cal.—Empire Company.

1281. **Crystalized Gold.**—BLAIR MINE, BANGHART LODGE, MAD MULE CAÑON, Shasta Co., Cal.—See No. 721.—Loaned by Sam'l Cooper.

1282. **Gold Quartz.**—IDAHO MINE, GRASS VALLEY, Nevada Co., Cal.—Ordinary Ore. This Mine, which is an extension of the celebrated Eureka Mine, has paid one hundred and three consecutive dividends. During the year ending Dec. 3d, 1877, 29,250 tons of quartz were crushed, yielding 28,925 ounces of bullion, valued at \$508,138 20—108 tons of rich sulphurets were sold. Average yield = \$18. 12 ½ per ton.—Idaho Company.

1283.—**Gold Quartz**, showing free gold.—IDAHO MINE, GRASS VALLEY, Nevada Co., Cal.—Idaho Company. See No. 1282.

1284. **Gold Quartz.** (*Gold, Galena and Chalcopyrite.*) Rich specimen.—IDAHO MINE, Nevada Co., Cal.—Loaned by Idaho Mining Co. See No. 1282.

1285. **Hanging Wall.**—IDAHO MINE, with Microscope Section (No. 1222), GRASS VALLEY, Nevada Co., Cal.—Idaho Company.

1286. **Horse**, in IDAHO MINE, GRASS VALLEY, Nevada Co., Cal.—Idaho Company.

1287. **Foot Wall.**—IDAHO MINE, with Microscope Section (No. 1221), GRASS VALLEY, Nevada Co., Cal.—Idaho Company.

1288. **Gold Quartz**, ordinary ore.—PROVIDENCE MINE, NEVADA CITY, Nevada Co., Cal.—Providence Company.

1289. **Sulphuret Ore**.—PROVIDENCE MINE, NEVADA CITY, Nevada Co., Cal.—Providence Company.

1290. **Wall Rock**.—PROVIDENCE MINE, NEVADA CITY, Nevada Co., Cal.—Providence Company.

1291. **Gold Quartz**. — ALASKA MINE, GRASS VALLEY, Nevada Co., Cal.—Alaska Co.

1292. **Wall Rock**.—ALASKA MINE, GRASS VALLEY, Nevada Co., Cal.—Alaska Company.

1293. **Gold Quartz**, with SULPHURETS.—DEADWOOD MINE, NEVADA CITY, Nevada Co., Cal.

1294. **Sulphuret Ore**. — MURCHIE MINE, INDEPENDENCE LODGE, NEVADA CITY, Nevada Co., Cal.—W. C. Stokes.

1295. **Native Silver**.—BAVICANORA MINE, near ARIZPE, Sonora, Mexico.—Ernest Narjot.

1296. **Gold Ore**.—MURCHIE MINE, BIG BLUE LEDGE, NEVADA CITY, Nevada Co., Cal.—W. C. Stokes.

1297. **Cement and Gold**.—GODFREY GRAVEL CLAIM, GRASS VALLEY, Nevada Co., Cal.—W. C. Stokes.

1298. **Wall Rocks**.—PENNSYLVANIA MINE, NEVADA CITY, Nevada Co., Cal.

1299. **Gold Quartz**.—PENNSYLVANIA MINE, NEVADA CITY, Nevada Co., Cal.

1300. **Gold Quartz**. — CENTENNIAL MINE, AUBURN, Placer Co., Cal.—Chas. H. Mitchell.

1301. **Wall Rock**. — CENTENNIAL MINE, AUBURN, Placer Co., Cal.—Chas. H. Mitchell.

1302. **Gold Quartz.**—PACIFIC MINE, GRASS VALLEY, Nevada Co., Cal.—W. C. Stokes.

1303. **Quartz Breccia.** — HIRCHMAN'S HYDRAULIC MINES, near NEVADA CITY, Nevada Co., Cal.

1304. **Cement,** associated with Gold. -- HIRCHMAN'S HYDRAULIC CLAIM, near NEVADA CITY, Nevada Co., Cal.

1305. **Silicified Wood.** — HIRCHMAN'S HYDRAULIC MINE, near NEVADA CITY, Nevada Co., Cal.—40 specimens, different varieties.

1306. **Rock** from head of Tunnel.—MARYLAND MINE, GRASS VALLEY, Nevada Co., Cal. This mine is an extension of the Idaho Mine (No. 1282), and is in the same fissure.—S. P. Dorsey.

1307. **Wulfenite** = Molybdate of lead.—EUREKA CONSOLIDATED MINE, EUREKA, Nevada; 700-foot level. — Loaned by Cal. State Geological Society.

1208. **Stone Hammer,** found 60 feet below surface.—LITTLE YORK MINING & WATER Co. Nevada Co., Cal.—Loaned by Chas. Mitchell, Grass Valley.

1309. **Earth containing Shells.**—Surface of the Desert, near DOS PALMAS, San Diego Co., Cal. The surface of the Desert at this point, is considerably below the level of the sea, and is thought to be the bed of an ancient sea.—Capt. Jay. G. Kelly.

1310. **Aragonite, (?) "ORANGE MARBLE."**—Solano Co., Cal.—J. & F. Kessler, 5 varieties. See No. 17.

1311. **Brecciated Marble.** — Monterey Co., Cal.—Capt. W. J. Woodley.

1312. **Marble.**—MONTEREY Co., Cal.—Pacific Carrara Marble Co. Ledges producing this Marble, are said to be

9000 feet in extent, lying within 21 miles from the Southern Pacific R. R.

1313. Gold Quartz and Free Gold.—NEW YORK HILL MINE, GRASS VALLEY, Nevada Co., Cal.—From the Company.

1314. Picrolite.—MARYLAND MINE, GRASS VALLEY, Nevada Co., Cal.

1315. West County Rock.—UTAH MINE, COMSTOCK LODGE, Virginia, Nevada.

1316. Wall Rocks.—MARYLAND MINE.—S. P. Dorsey. See No. 1306.

1317. Silver Ore.—“SEVENTY SIX” MINE, PIONEER DISTRICT, Arizona; $\frac{1}{2}$ mile from Silver King Mine.—Warren Holt.

1318. Pyrites, taking the form of wood.—SCOTT’S FLAT, Nevada Co., Cal.—M. Byrne, Jr.

1319. Gold Quartz.—DON MINE, GLOBE DISTRICT, Arizona.—A. W. Robinson.

1320. Silver Ore. (?)—LEACH MINE, ORD DISTRICT, San Bernardino Co., Cal.—O. G. Leach.

1321. Silver Ore.—SILVER CROWN MINE, GLOBE DISTRICT, Arizona; $3\frac{1}{2}$ miles from Globe City, Arizona.—A. W. Robinson.

1322. Silver Ore.—ADVANCE MINE, MONITOR, Alpine Co., Cal.—Cyrus Palmer.

1323. Silver Lead Ore.—“RYE PATCH” MINE, RYE PATCH CONSOLIDATED MINING CO., CHERRY CREEK AND ECHO MINING DISTRICT, Humboldt Co., Nevada.

1324. Silver Copper Ore.—BUENA VISTA MINE, ORD DISTRICT, San Bernardino Co., Cal.

1325. Cement Rock.—BENECIA, Solano Co., Cal.

1326. **Silver Ore.**—GILA SILVER MINING CO., REVEILLE, Nye Co., Nevada; 135 miles from Eureka, Nevada, which is the nearest Railroad Station.—(COUNTY ROCK LIME STONE) Ounces troy of silver per ton of 2000 pounds, 240.57.

1327. **Silver Ore.**—GILA SILVER MINING CO., REVEILLE, Nye Co., Nevada. Ounces of silver per ton, 63.18.

1328. **Silver Ore.**—GILA SILVER MINING CO., REVEILLE, Nye Co., Nevada. Ounces silver per ton, 164.02.

1329. **Silver Ore.**—GILA SILVER MINING CO., REVEILLE, Nye Co., Nevada. Ounces of silver per ton, 451.98.

1330. **Lubricating Machinery Oil.**—CALIFORNIA STAR OIL WORKS, San Francisco; from California Petroleum.

1331. **Dark Lubricating Oil**, 190 gravity.—CALIFORNIA STAR OIL WORKS, San Francisco; from California Petroleum.

1332. **Crude Petroleum**, from extensive deposits in VENTURA CO., CAL.—Star Oil Works, San Francisco.

1333. **Refined Petroleum**, from No. 1332.—California Star Oil Works, San Francisco.

1334. **Benzine.**—California Star Oil Works, San Francisco.

1335. **Silver Lead Ore.**—TYBO CONSOLIDATED MINING CO., TYBO, Nye Co., Nevada. Ounces silver per ton, 55.89.

1336. **Silver Lead Ore.**—TYBO CONSOLIDATED MINING CO., TYBO, Nye Co., Nevada. Vein in contact fissure; walls, limestone and porphyry. Distance from Eureka, Nevada, and R. R. 95 miles. Ounces silver per ton, 109.35.

1337. **Silver Lead Ore.**—TYBO, Nye Co., Nevada. Ounces silver per ton, 89.91; lead, 47%.—Tybo Consolidated Mining Co.

1338. **Silver Lead Ore.**—TYBO, Nye Co., Nevada. Ounces silver per ton, 532.17; lead, 48%.—Tybo Consolidated Mining Co.

1339. **Silver Lead Ore.**—TYBO, Nye Co., Nevada. Ounces silver per ton, 61.96; lead, 28%. — Tybo Consolidated Mining Co.

1340. **Silver Lead Ore.**—TYBO, Nye Co., Nevada. Ounces of silver per ton, 104.49; lead, 52%.—Tybo Consolidated Mining Co.

1341. **Silver Lead Ore.**—TYBO, Nye Co., Nevada. Ounces silver per ton, 53.46; lead, 22%.—Tybo Consolidated Mining Co.

1342. **Silver Lead Ore.**—TYBO, Nye Co., Nevada. Ounces silver per ton, 177.39; lead, 63%.—Tybo Consolidated Mining Co.

1343. **Argentiferous Galena.**—TYBO, Nye Co., Nevada. Ounces silver per ton, 71.68.—Tybo Consolidated Mining Co.

1344. **Argentiferous Galena.**—TYBO, Nye Co., Nevada. Ounces silver per ton, 77.76. — Tybo Consolidated Mining Co.

1345. **Argentiferous Galena.**—TYBO, Nye Co., Nevada. Ounces silver per ton, 218.70.—Tybo Consolidated Mining Co.

1346. **Argentiferous Galena.**—TYBO, Nye Co., Nevada. Ounces silver per ton, 174.96.—Tybo Consolidated Mining Co.

1347. **Blue Gravel**, Bottom deposit.—MINES OF SPRING VALLEY MINING & IRRIGATION CO., CHEROKEE, Butte Co., Cal. (Diamonds have been found at this locality.)

1348. **Yellow Gravel**, overlies the Blue Gravel (No. 1347.)—SPRING VALLEY MINING & IRRIGATION CO., CHEROKEE, Butte Co., Cal.

1349. **White Quartz Gravel**, which forms the back of the deepest Mines of **SPRING VALLEY MINING & IRRIGATION CO.**, **CHEROKEE**, Butte Co., Cal.

1350. **Argentiferous Galena**.—**OWENS RIVER MINE**, **GOLDOPOLIS DISTRICT**, Inyo Co., Cal.—Warren Holt.

1351. **Ulexite**.—**COLUMBUS**, Esmeralda Co., Nevada.—J. Mosheimer. To be sent to the Imperial Cabinet of Vienna, at the close of the Exposition.

1352. **Gold Quartz**.—**MOUNTAIN MINE**, **NEVADA CITY**, Nevada Co., Cal.

1353. **Gold Quartz**.—**BRUNSWICK G. M. Co.**, Nevada Co., Cal.

1354. **Silicified Wood**.—**NEVADA CITY**, Nevada Co., Cal.—Wm. F. Evens.

1355. **Ore worked for Gold**.—**COOPER MINE**, 6 miles N. E. from **SIERRA CITY**, Sierra Co., Cal.—A. C. Busch.

1356. **Silver Ore**.—**INFÍDEL MINE**, **BULL RUN DISTRICT**, Elko Co., Nevada. Assay value, \$3,000 per ton. (?) A. D. Meacham.

1357. **Porphyry**, **CARRYING CHLORIDE OF SILVER**.—**LEOPARD MINE**, Elko Co., Nevada. Assay value, \$3,000 per ton. (?)—A. D. Meacham.

1358. **Silver Ore**, (free silver).—**COLUMBIA LEDGE**, Elko Co., Nevada.—A. D. Meacham.

1359. **Gold Quartz**.—**INDEPENDENT MINE**, 8 miles south of **SIERRA CITY**, Sierra Co., Cal.—A. C. Busch.

1360. **Limonite**. (?)—**DOWNIEVILLE BUTTES**, Sierra Co. Cal.—A. C. Busch.

1361. **Crude Soda**.—From the Soda Springs, Churchill Co., Nevada; 20 miles from Wadsworth R. R. Station.

This Soda is being shipped to San Francisco in large quantities, and used for technical purposes.—Nevada Soda Co.

1362. Gold Quartz.—MARTIN QUARTZ CO., 3 miles south of SIERRA CITY, Sierra Co., Cal.—A. C. Busch.

1363. Gold Quartz.—PHOENIX MINE, 3 miles south of SIERRA CITY, Sierra Co., Cal.—A. C. Busch.

1364. Gold Quartz.—BIGELOW MINE, SIERRA CITY, Sierra Co., Cal.—A. C. Busch.

1365. Silver Ore.—HAMBURG MINE, EUREKA, Nevada.—From the Company.

1366. Copper Ore.—LOW DIVIDE, Del Norte Co., Cal.

1367. Sulphur and Cinnabar.—SULPHUR BANK QUICKSILVER MINE, Lake Co., Cal.—T. Parrott. To be delivered to the School of Mines, Paris, at the close of the Exposition. (See Nos. 37, 38 and 39.)

1368. Quicksilver Ore.—SULPHUR BANK QUICKSILVER MINE, Lake Co., Cal.—T. Parrott. To be delivered to the School of Mines, Paris. (See No. 1367.)

1369. Cinnabar.—SULPHUR BANK QUICKSILVER MINE, Lake Co., Cal.—T. Parrott. To be delivered to the School of Mines, Paris. (See No. 1367.)

1370. Sulphur.—SULPHUR BANK QUICKSILVER MINE, Lake Co., Cal.—T. Parrott. To be delivered to the School of Mines, Paris. (See No. 1267.)

1371. Cinnabar.—Concentrated from low grade ore.—SULPHUR BANK QUICKSILVER MINE, Lake Co., Cal.—T. Parrott. To be delivered to the School of Mines, Paris.

1372. Turbith Mineral.—Taken from the interior of the furnaces at the SULPHUR BANK QUICKSILVER MINE, Lake Co., Cal.—T. Parrott. To be delivered to the School of Mines, Paris.

1373. **Turbith Mineral.**—Decomposed by water. (See No. 1372)—T. Parrott. To be delivered to the School of Mines, Paris.

1374. **Silver Ore.**—SIGNAL MINE, Mohave Co., Arizona.—Chas. W. Banks.

1375. **Silver Gold Ore.**—ARNOLD LEDGE, CEDAR DISTRICT, Arizona.—Chas. W. Banks.

1376. **Silver Ore.**—TIGER MINE, Yavapai Co., Arizona.—Chas. W. Banks.

1377. **Silver Ore.**—MCGEARY MINE, CEDAR DISTRICT, Arizona.—Chas. W. Banks.

1378. **Quicksilver Ore.**—GUADALUPE MINE, Santa Clara Co., Cal.—Maurice Dore. (See No. 25.)

1379. **Chalcedony.**—DOUGLASSVILLE, Tuolumne Co., Cal.—Laurent Barada. To be sent to the Fabre Museum, Montpellier, France.

1380. **Porcelain Clay.**—Sacramento Co., Cal., 9 miles from railroad. This clay is extensively used in the manufacture of coarse pottery, sewer pipes, tiles, fire bricks etc., at Sacramento.—John B. Owens, Agent for Pacific and Sacramento Potteries.

1381. **Porcelain Clay.**—Sacramento Co., Cal., 3 miles from railroad.—John B. Owens, Agent Pacific and Sacramento Potteries.

1382.—**Samples of Pottery and Sewer Pipes.**—PACIFIC AND SACRAMENTO POTTERIES.—John B. Owens, Agent.

1383. **Unburned Fire Brick,** made from Clay.—PACIFIC AND SACRAMENTO POTTERIES.—John B. Owens, Agent. (See No. 1380.)

1384. Burned Fire Brick.—PACIFIC AND SACRAMENTO POTTERIES.—John B Owens, Agent.

1385. Quicksilver Ore.—METACINNABARITE AND CRYSTALIZED CINNABAR.—REDINGTON MINE, Lake Co., Cal.—Redington Co.

1386. Diatomaceous Earth.—Near VIRGINIA CITY, Nevada, sold under the name of "Electro Silicon," for polishing purposes. (See No. 179.)—Redington & Co.

1387. Whet Slate.—EL DORADO HONE LEDGE CO., El Dorado Co., Cal.—Chas. E. Convis.







JAN 24 1938

